HEALTH SCIENCES LIBRARY
UNIVERSITY OF MARYLAND
BALTIMORE

F MARYLAND
LIBRARY
Founded 1813
SCHOOL OF MEDICINE


Digitized by the Internet Archive
in 2016

https://archive.org/details/journalofiowasta4511iowa

R 1 9 '55

THE

Journal

OF THE IOWA STATE MEDICAL SOCIETY

CONTENTS

The Difficult Patient
Howard P. Rome, M.D., Rochester, Minnesota 1

The Treatment of Intractable Pain
Carroll A. Brown, M.D., and Joseph F. Kell, Jr., M.D., Sioux City 4

Thromboembolism and Anticoagulants in Surgery
Edward E. Mason, M.D., Iowa City .. 8

Early Postsurgical Ambulation
Louis T. Palumbo, M.D., Des Moines . 12

Dizziness of Obscure Etiology
C. M. Kos, M.D., Iowa City 13

State and Federal Help in Programs for Older Citizens
F. W. Pickworth, Des Moines . . . 19

State University of Iowa College of Medicine Clinical Pathologic Conference 22

(Continued on page iv)

Easy to give . . . and to take

ILOTYCIN DROPS

(Erythromycin, Lilly) Ethyl Carbonate

Unexcelled antibiotic spectrum—notably safe

Meets the exacting demands of

Physician—Mother—Baby

Lilly

Another reason to

consider ILOTYCIN FIRST

JANUARY, 1955



for the epilept

Modern diagnostic methods and effective anticonvulsants now help the patient with epilepsy enjoy greater freedom from seizures. And with a more understanding society, greater independence is assured.

UNIVERSITY OF MARYLAND
LIBRARY
Founded 1813
SCHOOL OF MEDICINE

DILANTIN® SODIUM (diphenylhydantoin sodium, Parke-Dav

an established anticonvulsant of choice, alone or in combination, for control of grand mal and psychomotor seizures -- without the handicap of somnolence.

DILANTIN Sodium is supplied in a variety of forms -- including Kapseals® of 0.03 Gm. (½ gr.) and 0.1 Gm. (1½ gr.) in bottles of 100 and 1,000.

46220

'eater independence



MEDICAMENTA VERA

Parke, Davis & Company

DETROIT, MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV JANUARY, 1955 No. 1

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
MISS MARY L. MCCORD, Business Manager..Des Moines
MR. EDWARD W. HAMILTON, Assistant Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

WENDELL L. DOWNING, M.D., Trustee.....Le Mars
GEORGE H. SCANLON, M.D., Trustee.....Iowa City
FRED STERNAGEL, M.D., Trustee.....West Des Moines
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio*, Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

CONTENTS

(Continued from page i)

EDITORIALS

Happy New Year! 29
Routine Tetanus Prophylaxis Is Inadequate . 29
Show Business Blamed for Sex Hysteria . . 30
Work-Simplification for the Homemaker . . 31
Medical Aid Program for the Orient . . . 31

SPECIAL DEPARTMENTS

Letter to the Editor 32
Minutes of Meetings of State Society Officers and Committees 32
President's Page 47
Iowa Academy of General Practice 48
The Doctor's Business 49
Blue Cross-Blue Shield 50
The Journal Book Shelf 51
State Department of Health 52
Woman's Auxiliary News 54
Speakers' Bureau Schedules 56

County Societies
Meetings 57
Deaths 58
Mental Illness 58
The Month in Washington xviii
Personals xxii
Roster of Iowa Physicians in Military Service xxvii

MISCELLANEOUS

Change in Medical School Rules Advocated . 11
Federal Action on Narcotic Addiction . . . 28
Lectures on Streptococcal Infections . . . 28
Mayo Lectures and Discussions 28
Special Session of the House of Delegates of the Iowa State Medical Society, Des Moines, December 12, 1954 33
Interim Session of the House of Delegates of the AMA, Miami, Florida, November 29-Dec. 2 44
Health Costs Estimated and Subdivided . . 46
Repeats Gift to Ed. Fund 46
Iron Lung?—Not for Me! 46
New Circulation Record 58
Ob. & Gynec. Conference at Omaha . . . xx
National Registry of Medical Secretaries . . xxvii

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



The Difficult Patient

HOWARD P. ROME, M.D.

ROCHESTER, MINNESOTA

THE CONCEPT OF "the difficult patient" lies at the heart of the practice of medicine, for the very idea of a difficult patient has as its basis a psychologic tie between the patient and his physician. The importance of the positive aspects of this relationship are well known. It is accepted as self-evident that, other things being equal, therapeutic progress goes hand in hand with the patient's liking his doctor and the doctor's reciprocating that feeling. Dr. Oliver Wendell Holmes[1] encouraged this interchange of personal feelings when he admonished his student-physicians in the words of Hufeland to "generalize the disease and individualize the patient." Dr. W. J. Mayo[2] stressed the same positive aspect when he urged that the patient be made the hub of the wheel, not a spoke. Dr. Francis W. Peabody[3] put it more bluntly: "The secret in the care of a patient is in caring for him."

Very much less has been said and written about the negative aspects of the relationship between the physician and the patient. In discussions of the practice of medicine, these negative personal aspects have been slighted, perhaps because they are classed with other sorts of therapeutic failures. But a wealth of insight can be gained by considering them. Indeed, the only valid answers to the problem of the difficult patient are to be found through an inquiry into the negative aspects of the physician-patient relationship.

Unresolved conflict sets the stage for the negative feelings of distrust or suspicion or anger or dissatisfaction. By their very nature, these sentiments are unpleasant and disturbing. Their presence creates emotional barriers that are immediately apparent. From early childhood, all of us are attuned to sense acceptance or rejection by other people. We have been taught to be particularly responsive to the disapproval that is obvious in negative feelings. We have learned also, from long and painful experience, that the best defense against criticism is an offense. And so, to place the blame for conflict on someone else, we strike two blows with a single stroke: we proclaim self-innocence and at the same time we indict the other person.

Dr. Rome is a member of the staff in the Sections of Neurology and Psychiatry of the Mayo Clinic and of the Mayo Foundation, which is a part of the Graduate School of the University of Minnesota.

PATIENT NOT ALWAYS FULLY TO BLAME

When one of us speaks of a patient as "difficult," he puts the onus upon the sick man. The physician, by placing it there, would have his hearers believe that his role in the conflict is a wholly neutral one. Although this may be true in many instances, the responsibility for negative feelings in the doctor-patient relationship, as it is in other human affairs, sometimes is attributable to one party and sometimes to the other, but most often it belongs to both. Two questions have to be answered if such a conflict is to be resolved: "What is the real issue?" and "What have been the contributions of each participant?"

There are many difficult patients whose behavior and feelings of distrust, anger, suspicion or dissatisfaction make it seem all but impossible for the physician to establish a working relationship. At first glance, it seems obvious that the physician is merely an accidental target for the expression of these feelings. However, on a more penetrating inquiry into the specific events which preceded the expression of those feelings about the physician, one finds very suggestive data. Some provocation of the patient whose attitudes make him vulnerable to an explosion always occurs before those attitudes come into the open and are directed toward the physician. It is only the rarest occurrence that such feelings are expressed entirely without cause, even by a grossly psychotic patient. In retrospect, it can be seen that often the physician-victim of a paranoidal assault has con-

tributed to his victimization, notwithstanding superficial appearances to the contrary. The same kind of cryptic participation seems to be equally true of the ostensible victims of physical violence by the nonpsychotic. It takes two to make a fight! Unconsciously, at least, physicians who complain of difficult patients are guiltier of complicity than is immediately evident. The physician who is repeatedly involved in litigations with patients belongs in this same category.

These are the circumstances of this complex and superficially paradoxical emotional interplay. An excellent example is the overtly paranoidal patient. A detailed history shows that he has been sensitized to a suspicious and continually rejecting environment. The people whom he is most closely associated, usually his parents, have subtly conditioned his response to this kind of behavior, with the result that he and they live in an atmosphere of mutual distrust.

In all similar instances, it appears that the relationship between the provocateur and the provoked is carefully established and is nurtured by strategically timed thrusts of hostility to the point where all acts which bear even a remote resemblance to a hostile gesture are automatically parried, as if they were in fact hostile. When this pattern is initiated at a vulnerable time, it is prone to become a habitual technic for dealing with everyone. It may then be triggered by people or circumstances symbolically reminiscent of the patient's early life experiences. Each subsequent encounter produces the same result. This repetition justifies an attitude of constant preparedness and makes everyone instantly suspect. In a progressively larger number of situations, the feeling of distrust is built up, until the patient is unalterably committed to this stereotyped means of dealing with everyone. That is why the paranoid patient is difficult.

This rigid, unyielding attitude is at one end of a spectrum. There are lesser degrees of the same phenomenon. Habitual patterns of aggression and submission, for example, are erected in much the same way. Then too, there is a parallel tendency in everyone to put things in certain categories according to previous experience. Certain people or certain roles which people play, and even certain behavior, are lumped together so that, for example, persons conditioned by an unhappy experience respond repeatedly in an unhappy way whenever they meet a related symbol of that experience. Also the range of relatedness is so great that unless one were thoroughly familiar with the entire situation, he could not possibly see the connection between the symbol and the response.

The passive, submissive person is patterned to react in a deferential, propitiating, emotionally distant and placating way toward those in positions of relative authority. It is as if there were a compulsion to twist every new situation in an effort to make it fit the old, familiar pattern, so that he could deal with it by means of old, familiar technics. This is the model for all neurotic character development. It should be evident that only a few of these neurotic character patterns are obvious clinically. The vast majority are subclinical in the sense that they are evident grossly only at times of tension and stress.

This way of dealing with people is more or less true of everyone. In situations of more than ordinary emotional tension, there is a universal tendency to fall back on habitual, familiar patterns. These were the first ways we learned in which to communicate our feelings and control our environments. Thus, in times of stress, a high price is placed on originality. Conversely, since the price of falling back into old, familiar ways of doing things is much lower, new and taxing demands are almost invariably met by old means. It has long been recognized that new ways are learned slowly and laboriously; the paranoid is driven by patterns of thinking and feeling of which he is no longer conscious, and thus, powers over which he has no control force him to manipulate his environment so that, strange as it seems, he can continue to be a paranoid. In turn, the environment most often responds in like fashion. The hostile person unconsciously cultivates his truculence in a predatory fashion, looking, as it were, for someone as receptive to this technic of control and communication as he is himself. Distrust breeds distrust. Uncertainty has a penchant for ferreting out uncertainty in others. These are a few of the variants on an old theme that is familiar in its more literary forms: "Birds of a feather flock together"; "It takes a thief to catch a thief."

THE PHYSICIAN'S RESPONSIBILITY

The physician is in the center of this maelstrom of emotions, in every clinical situation. He sets both the psychologic stage and the permissable limits for the patient's response. Consciously and unconsciously, he allows his relationship with the patient to promote or repress certain latent dispositions. His very therapeutic regimen is an indication of the kind of person he is: exacting or permissive; meticulous or careless in details; controlling and regulating, or supportive from a distance; prone to anxiety and worry about details, or confident, assured and assuring.

Obviously, the static approach to clinical medicine which treats all patients as though they were simply the noncontributing carriers of diseases or injuries will yield a high percentage of difficult patients. The sterility of this approach is not limited to clinical practice. Clinical investigation also is founded on a base of perceptive communication which appreciates the unique individuality of each patient.

In a presidential address to the American Society for Clinical Investigation, in 1951, Dr.

Eugene Ferris[4] pointed out: "The ability to investigate the more intricate workings of man requires some recognition of the facts that man resists being controlled, that he perceives through others than the five senses, that he communicates through the spoken and unspoken word and that the investigator is just as human as the subject." This is a glimpse into some parts of the background of the problem.

A host of specific, difficult patient-doctor relations occur so frequently and commonly that they deserve at least passing attention. The need to be sick or to perpetuate convalescence—that is, to use symptoms as a crutch and as a weapon—is so widespread in any representative practice as to provide an excellent illustration of the typical physician's maneuvers and the typical patient's responses. For good and sufficient reasons in their earlier experience, these patients have felt inadequate and overwhelmed when they were confronted by trying situations in their domestic affairs, in their work or in the face of some emergency. They betray their sense of deficiency in the form of physical symptoms. Their medical history is typical. Protracted convalescence seems to be the rule; tolerance of stress is low and response to it usually has been one of physical complaints. Characteristically, these patients react disproportionately to pain and injury. Fatigue, weakness and lack of capacity are prominent among their defenses against real and fancied threats.

By his over-all approach to their problem, the physician not only sets the tone for all his future dealings with potentially difficult patients, but also lays the foundation either for their future recovery or for their continued invalidism. Everything depends upon how he responds to the patient's recital of worries, whether with pointed inquiries, a shrugging dismissal of a symptom or an enigmatic blandness that leaves the patient in an even worse quandary.

ANXIETY IS NO. 1 PRESENTING COMPLAINT

The person who presents himself to a physician does so, in the final analysis, because of anxiety. He has symptoms which he suspects are caused by something, but the cause and the remedy are beyond his capacity. The consequent worry forces him to seek help. Whether the chief complaint in motivating his decision is a productive cough, double vision or pain, the patient seldom mentions the concern that his uncertainty has occasioned him. But he has to be relieved of the doubt by an authoritative statement from someone who knows—a doctor. It can be assumed that all patients have some unresolved anxiety or they would not seek help. In most instances the amount of it is well within the patient's tolerance, and he alludes to it only in an indirect way, by asking to be told what to do and how to do it. In turn, the physician's prescription or the regimen he recommends indirectly treats this anxiety, for, in effect, it promises improvement, if not actual cure.

These basic feelings underlie every clinician's relations with his patients. Though little, if any, of this is ever spelled out openly, these are the nonverbal exchanges which the skilled physician grasps intuitively. The need to resolve this anxiety makes the patient liable to suggestive influences of one sort or another. He takes hints and cues from his physician's tone of voice, mannerisms or hesitations in the same way that an anxious, fearful child is alarmed or calmed by the responses of his parents.

THE ALARMIST PHYSICIAN

The physician who is unaware of this aspect is likely to misuse a powerful therapeutic tool. For example, consider the doctors who are alarmists. Their degree of personal anxiety is chronically high. They compensate for the insecurity which their anxiety represents by an attitude of fear which they project to their patients. They rationalize their attitude by reminding themselves of the principle that the patient has a serious disease until it is proved otherwise. In practice they undertake mountainous measures to diagnose and treat molehill symptoms. Their equally insecure and more suggestible patients soon find encouragement for their tendencies to worry about trifles, to take refuge in minor illnesses and to explain every deficiency as an organic defect.

The physician who is intolerant of, or personally disturbed by, emotional interplay inadvertently imposes a great burden on his patients. He wrongly assumes that everyone is possessed of an equal capacity for handling tension, and acts accordingly. He is tactless under the guise of being honest and direct. He sees little need for the preparation of patients for disturbing news. He gives prognostications and diagnoses to all patients indiscriminately, forgetting that one man's meat is another's poison. His presence suppresses the free expression of feeling, and when his patient unfortunately yields to the temptation, the physician lectures him on the benefits of maintaining a stoical attitude. He inveighs against what he calls "the patient's weakness" by recounting in detail the much worse plights of other patients.

OTHER TYPES OF ERRING PHYSICIANS

The opposite sort is typified by the physician who infantilizes his patients. By suggestion and prescription, he fosters their dependence. Bed rest, vacations and repeated admonitions to "take it easy" are ordered p.r.n. Hormones, vitamins and tonics are the agents with which he implements the bold suggestion that the patient's endocrinologic tides, his diet or his "energy reserves" are somehow or other deficient and need to be supplemented periodically.

The physician who cannot be wrong is another

kind of practitioner who imposes serious strictures on his patient's welfare. The patient's requests for information are treated as if they were impertinences. If the patient fails to respond to a therapeutic program as expected, he is told that the fault must lie within himself. He must have failed to obey instructions. The suggestion that two heads are better than one is countered as though a request for a consultation were synonomous with a challenge. This physician's competitiveness leaves his patients no alternative other than resignation of independence.

Sir Lionel Whitby,[5] the Regius Professor of Physic at Cambridge University, in an address entitled "The Science and Art of Medicine," observed that "As things are, the normal variations in individuals have such a wide range that both the automatic interpretation of facts and the mechanical prescription of treatment are prohibited. . . . Every patient requires a different method of approach according to his psychology, whether for the purpose of eliciting a reliable history, of making a clinical examination, or of obtaining a sample from a vein or the spinal theca." When we physicians neglect our attendance to this demand of the art of medicine, we *make* our patients difficult.

REFERENCES

1. Holmes, O. W.: Medical Essays: 1842-1882. Boston, Houghton, Mifflin and Company, 1891, p. 275.
2. Mayo, W. J.: Edward Martin, M.D., 1859-1938. Collect. Papers Mayo Clin. & Mayo Found., **30**:919-921, 1938.
3. Peabody, F. W.: Doctor and Patient, In: Papers on the Relationship of the Physician to Men and Institutions. New York, Macmillan, Jr., 1930.
4. Ferris, E. B. Jr.: Presidential Address: Inquiry into the Meaning of Clinical Investigation. J. Clin. Invest., **30**:623-625, (June) 1951.
5. Whitby, L.: The Science and Art of Medicine. Lancet, **2**:131-133, (July 28) 1951.

The Treatment of Intractable Pain

CARROLL A. BROWN, M.D., AND JOSEPH F. KELL, JR., M.D.

SIOUX CITY

PAIN BRINGS MORE individuals to the doctor than does any other complaint. The vast majority of these patients are diagnosed and treated more or less successfully, but there remain a few in whom pain persists, regardless of treatment. Intractable pain is the sort that is completely unmanageable.

This discussion does not include severe pain of specific types, such as tic douloureux. The most common cause of intractable pain is that produced by inoperable malignant neoplasms, but there are a few other syndromes of pain, not due to cancer, that are included in this paper. There comes a time when the patient is past the help of surgery to the tumor and when narcotics give no relief. Patients of this type are incorrigible to themselves, their families and their doctors. The neurologic surgeon may then be asked for an opinion on whether surgery in his field will relieve the symptoms.

ANATOMY

The fundamental anatomy of pain is simple. As all of us remember, a pain receptor in the tissue will carry the impulse along a peripheral nerve into the spinal cord. The spinal cord entrance is made either directly by sensory root or up the sympathetic chain to a higher level, but all nerves enter the cord and soon cross to the other side. The pain sensation is carried in the spino-thalamic tract up the spinal cord, medulla and mid brain, into the thalamus. The thalamus is the great brain center for the *perception* (recognition) of sensation, and it is there that the individual first knows there is pain in a specific area of his body. The route from the thalamus to the cortex of the brain is more difficult to follow. In this highest brain level, the *appreciation* of pain occurs. There have been cases of pain-free individuals[30] in whom it is believed that the thalamus was functioning normally, but who did not appreciate pain because of some inhibition or defect in the cortex. Emotionally preoccupied individuals, such as athletes concerned about the progress of the game in which they are playing or people who are in the heat of anger, may fail to appreciate the pain of an injury until after their emotional stress is over. In contrast, the slightest physical pain becomes unbearable in the apprehensive patient. Therefore, pain is felt or perceived at the thalamus, but the conscious acceptance of it can vary with emotion.

Of the considerable body of literature on surgery for the relief of pain that has accumulated over the last 40 years, only the major writings of the last four years are included in the bibliography appended to this paper. Clinical study is still being conducted in anatomy, physiology and the clinical responses to pain, and it probably will be some years before hard and fast rules can be established on pain surgery.

Peripheral nerve surgery is seldom used today because muscles are always paralyzed in the proc-

ess. Occasionally, a peripheral neurotomy is used in relieving arthritic pain of a hip joint,[19] but it is of no use in cases of malignant disease.

RHIZOTOMY AND SYMPATHECTOMY

The first practical site for surgical interruption of pain fibers is at the entrance of the sensory nerve into the spinal cord. This rhizotomy is occasionally used in rare thoracic or abdominal neuritis involving only a few nerves. The operation is unsatisfactory in most cases of malignant disease because it requires a major laminectomy, it leaves muscle weakness, it causes loss of all sensation and it frequently fails, in some measure, to eliminate pain.

For treatment of cancer pain, some surgeons prefer to attack the sympathetic system. Pain described as dull aching, burning, or colic is known to arise in nerve endings of the sympathetic nervous system. Injection of the sympathetic nerves with procaine or a similar type of solution is used for evaluation, and, if pain is completely relieved, surgery can be performed.[43] Alcohol injection of the sympathetic nerves has also been recommended,[4] but secondary neuritis will complicate the usual technic of alcohol injection if nearby somatic nerves are involved. In painful conditions of non-malignant origin, such as chronic pancreatitis,[7, 8] severe dysmenorrhea, causalgia, angina pectoris[11] and the gastric crisis of tabes,[3] sympathectomy brings about a remarkable degree of pain relief, and there are few disabling effects.[46] A disadvantage is the necessity for two major operations if sectioning of both the right and left sympathetic nerve supplies is required. It is not uncommon for pain to recur because the somatic nerve fibers are still intact and the malignancy may spread. In general, sympathectomy for the relief of pain in cancer is a highly selective procedure and proves satisfactory only in a few cases.

CORDOTOMY

The first major surgical procedure for the relief of pain was the cordotomy done by Spiller in 1912. This is a selective sectioning of the spino-thalamic tract in the anterio-lateral portion of the spinal cord. All cordotomies require a laminectomy. The classical operation is done in the upper thoracic spine, where incisions into the spinal cord can be made on either one or both sides.[48] Pain relief occurs from the mid-abdomen downward. Recently,[13] the operation has been used in the upper neck region to relieve pain from the shoulder and upper extremity, down a whole side of the body. The cervical cordotomy is technically more difficult. The neurological section is made in the upper three cervical segments of the spinal cord so near vital centers that each side requires a separate operation.

An advantage of the cordotomy procedures is the retained sense of touch in the areas that have no pain sensation. The patient can walk and will appear to be a normal individual.[16, 31, 49] Recent improvements in surgical technic have made this well-known operation even more effective for the relief of pain in the desired areas.[23] There are several disadvantages of cordotomy, however, for it is a major operation, and in cancer patients usually requires multiple blood transfusions. It necessitates two or three weeks of hospitalization, and the patient who has a drug addiction will require additional treatment. Persons over 60 years of age frequently have postoperative dizziness and weakness on standing because of a marked drop in blood pressure as a result of the postural change.[22] After some weeks, this orthostatic hypertension gradually leaves. A few patients will have weakness of their legs, although eventually they can walk alone. It is our personal belief that the cordotomy is useful in patients whose life expectancy is at least three months, so that they are likely to make a satisfactory recovery from surgery and still have an interval of peaceful living. Occasionally, the cordotomy is a very effective surgical procedure in pain that is not of malignant origin, such as pain in the paraplegic, certain types of peripheral vascular diseases that have not responded to sympathectomy,[39] and in the phantom limb syndromes.[12, 50]

In the brain, the spino-thalamic tract traverses the medulla and the mid-brain, where it is accessible to neurologic surgeons. In the medulla, the sectioning of the tract is known as medullary tractotomy. It has been used most frequently by surgeons in Europe. Its best application has been for the relief of facial neuralgias by means of sectioning the trigeminal tract, which is near the spino-thalamic tract.[15] And it can be used for the relief of pain from malignancy of the face and head.[6, 9] An occasional result of the medullary tractotomy is a persistent ataxia of the lower extremities. In a few instances, because vagus fibers have been disturbed, involvement of the recurrent laryngeal nerve occurs, and persistent hoarseness will remain. The operation requires several weeks to several months for complete recovery of the patient. Individual variations in major landmarks of the medulla can make the tractotomy technically difficult. Most neurologic surgeons believe a medullary tractotomy is the procedure of choice only in rare cases of severe pain of the head and one side of the body. In our cases of malignancy confined to the head, we prefer to cut the cranial nerves on one side. All the sensory nerves of the head and neck can be selectively sectioned at one operation. This includes the trigeminal, the nervus intermedius of the facial nerve, the glossopharyngeal and the upper vagus, as well as the sensory fibers down through the cervical fourth nerve. This provides anesthesia for the relief of pain. The operation is long, but the patient will make a rapid recovery and can be ambulatory within a week's time.

The sectioning of the spino-thalamic tract in the mid-brain is an extensive operation, for the approach to the region is difficult, and local blood vessels make the incision hazardous. The operation has a fairly high mortality. After the second postoperative week, the patient frequently develops a burning sensation of one side of the body that is even more intolerable than the original pain.[10] For those reasons, the mesencephalic tractotomy is seldom done today.

ELECTRICAL SURGERY

Since the thalamus is the brain center of pain perception, it is obvious that surgery directly to it would be most desirable. Initial work of this type was first reported shortly after World War II. The great problem has been the accurate localization of the thalamus and each of its separate nuclei from external skull measurements. An instrument known as a sterotaxic device has been developed which fits onto the head and helps in the calculation of the exact location of the thalamic nuclei.[41] Through small openings in the skull, fine electrodes are introduced into this pain center, and selective destruction by electrical current is carried out.[42] Several such devices are now being used in research centers over the world, but sufficient knowledge has not yet been tabulated to permit common use of the procedure. It is estimated that 10 or 15 years of further research on the thalatomy operation will be required before it passes from the experimental stage into practical use, but it could well become the most useful type of surgery for intractable pain.

LOBOTOMY

Above the level of the thalamus are the diencephalon and cortex, where the appreciation of pain occurs. This appreciation could be called the human factor in pain. Psychiatrists report that they have relieved the intractable pain of advanced cancer by protracted and constant attention, so that narcotics were not necessary. Thus, it would seem that pain is often a relative complaint. The individual with cancer frequently develops anxiety, fear and even distrust, for no one seems to be able to help him in his agony. Since 1947, the prefrontal lobotomy, the topectomy and the transorbital lobotomy, as well as several other types of related operations, have been used in cancer patients with pain.[17, 20, 24, 25, 27, 40] At first, these operations were received with much enthusiasm, but later the undesirable effects became apparent. The personality and the mentality of the patient were frequently jeopardized.[26, 32, 35, 45] There may be justification for accepting the attendant risk in certain instances, but the balance of gain and loss remains a serious problem to the surgeon who is contemplating this type of surgery. Recent knowledge of the location of the higher brain areas related to pain will help physicians avoid the undesirable effects of this type of surgery.[18] Major surgery to the frontal lobe probably will be less frequent except in advanced psychiatric conditions.[34] In the field of pain, lesser procedures seem to be more desirable and are equally effective.[47] Transorbital lobotomy is a simple operation, but in the debilitated or aged individual with arteriosclerosis, fatal hemorrhage can occur from it.[21] Furthermore, many neurosurgeons question whether brain section can be done accurately enough, in the anatomico-surgical sense.

PREFRONTAL PROCAINE INJECTION

For several years, the injection of solutions into the frontal lobes of the brain has been tried.[1, 2, 5, 29, 32] Procaine has been used to test the justification for surgical lobotomy in psychiatric and intractable-pain cases. As small an amount as 4 cc. is reported to have given several months of relief from pain.[44] Other chemicals have been tried, but have caused brain damage.[28] Procaine causes minimal permanent damage and may have some selective affinity to nerve tissue that makes it additionally desirable.

Recently we have used prefrontal injections of procaine in five individuals, three of whom had been highly emotional for many years and four of whom were addicted to narcotics. The results in each case were most satisfactory to the patient and to his immediate family, as well as to the referring doctor. All of the patients have subsequently died of their malignancies, having lived from three weeks to three months after the procaine lobotomy.

The first case had a chronic anxiety neurosis and a carcinoma of the cervix, with severe pain in the right pelvis. The first injection controlled the pain and the narcotic addiction within a few days. When, in about three weeks, the pain returned, a second injection was made. The patient remained mentally alert and free from pain until about two months later, when she died from metastasis to the lung. The next case treated was a woman who had had a metastasis of ovarian carcinoma to the thoracic spine. The third was one with a large inoperable sarcoma of the right axilla, involving the brachial plexus. The fourth case was a man with carcinoma of the lung and intractable pain in the right arm. The last patient had carcinoma of the cervix, with extensive thrombophlebitis and lymphedema of the right lower extremity. Each case obtained relief from pain and freedom from drug addiction, and required a minimum of care in the last weeks of advancing malignant disease.

The surgical technic consisted of a bilateral prefrontal trephine, with opening of the dura and electro-coagulation of the dura and arachnoid. Local anesthetic was used, and, if pain made the patient restless, light intravenous anesthesia was added. In 48 hours, an injection of 15 to 18 cc. of

two per cent procaine at three or four different sites in the frontal lobe was done under local anesthesia only. The injection was made with a fine spinal needle, during which the patient's responses, as well as his blood pressure, pulse and respirations, were carefully observed. The injection was made slowly in each site, until the patient became either euphoric or drowsy and the pain disappeared. We found that the highest threshold of pain control was obtained when the blood pressure rose during the procaine injection.

It is interesting to note that in animal experimentation, sudden death was reported to occur when procaine apparently infiltrated the ventricular system. One of our cases had a complete cardiac and respiratory failure after the injection had been completed. Intracardiac adrenalin with endotrachial intubation and oxygen was immediately administered, and within five minutes, the patient began to respond. She was drowsy for approximately 24 hours, but at the end of that time she was eating, moving about in bed and talking spontaneously. We now avoid tapping the ventricle, for to do so may leave a tissue tract through which procaine can enter the cerebral spinal fluid. We always have anesthetic help immediately available during the injection.

In the private practice of neurologic surgery, because patients with intractable pain are frequently seen only when they are late in the malignant disease, the more desirable procedures of cordotomy or sympathectomy can infrequently be considered. It is our finding that the prefrontal injection of procaine will obtain the desired relief of pain and release from drug addiction. We have found it advisable to inject both sides at the same time. Personality change has been minimal and usually does not last over 24 to 48 hours after the injection. This type of surgery is economically sound, for hospitalization need not exceed five to seven days. Afterward, simple nursing care is sufficient for the patient's needs. If pain recurs later in the disease or if the initial injection has been insufficient to relieve pain, it can easily be repeated at any time. With the new neurophysiologic concepts of pain tracts in the frontal lobe,[14] selective infiltration of the inferior medial quadrant, and possibly of the superior medial quadrant, will require smaller amounts of procaine, and personality damage can be avoided. Prefrontal injections can maintain a patient as a human personality in the face of a fatal disease, permit him to have full contact with reality, and yet keep him at peace in a world of sickness.

CONCLUSION

In the treatment of intractable pain, a few surgical procedures are of great value. Bilateral upper thoracic cordotomy is the choice surgical procedure, but to be beneficial to the patient, it must be done early in the disease. High cervical cordotomy is of value for relief of pain in the upper extremities and chest, but it has features that require careful preoperative consideration. A few selected individuals will respond well to suitable sympathectomy, but it cannot be used as frequently and as effectively as cordotomy. In intractable pain of the head, rhizotomy of the cranial and upper cervical nerves is preferable, although medullary tractotomy may be indicated under certain circumstances. All of those procedures require major surgical intervention, which in the late stages of malignancy are impractical because of the prolonged hospital stay, the expense and the risk to the patient who is in the final metabolic strife of malignant disease. In our opinion, prefrontal procaine infiltration is the procedure of choice in late metastatic cancer with intractable pain. It can be readily controlled by the use of variable amounts of procaine, it can be repeated with minimum discomfort and it requires a very short hospital stay. The development of the technic of electrical surgery to the thalamus eventually may give us better control of intractable pain than any presently utilizable method does, but that procedure is still inapplicable to the general practice of medicine.

BIBLIOGRAPHY

1. Abely, P.: Enseignements d'un an de pratique des injections thérapeutiques intracérébrales non mutilantes et non nécrosantes. Acta neurol. et psychiat. belg., **52**:271-280, (May) 1952.
2. Bailey, O. T., Small, W. T., and Ingraham, F. D.: Procaine block of frontal lobe white fibers as a means of predicting the effect of prefrontal lobotomy. J. Neurosurg., **9**: 21-29, (Jan.) 1952.
3. Bingham, J. R., Ingelfinger, F. J., and Smithwick, R. H.: Effect of sympathectomy on abdominal pain in man. Gastroenterology, **15**:18-31, (May, pt. 1) 1950.
4. Bonica, J. J.: Management of intractable pain with analgesic blocks. J.A.M.A., **150**:1581-1586, (Dec. 20) 1952.
5. Bucaille, M.: Infiltration novocaïnique préfrontale pour le traitement des douleurs irréductibles des cancéreux. Rev. neurol., **86**:257-258, 1952.
6. Crawford, A. S., and Knighton, R. S.: Further observations on medullary spino-thalamic tractotomy. J. Neurosurg., **10**:113-121, (Mar.) 1953.
7. Connolly, J. E., and Richards, V.: Bilateral splanchnicectomy and lumbodorsal sympathectomy for chronic relapsing pancreatitis. Ann. Surg., **131**:58-63, (Jan.) 1950.
8. De Takats, G., Walter, L. E., and Lasner, J.: Splanchnic nerve section for pancreatic pain. Ann. Surg., **131**:44-57, (Jan.) 1950.
9. D'Errico, A.: Intramedullary spinothalamic tractotomy. J. Neurosurg., **7**:294-298, (July) 1950.
10. Drake, C. G., and McKenzie, K. G.: Mesencephalic tractotomy for pain. J. Neurosurg., **10**:457-462, (Sept.) 1953.
11. Evans, J. A., Poppen, J. L., and Tobias, J. B.: Relief of angina pectoris by sympathectomy; report of results in 10 patients subjected to high thorocolumbar sympathectomy including anginal pathway. J.A.M.A., **144**:1432-1436, (Dec. 23) 1950.
12. Falconer, M. A.: Surgical treatment of intractable phantom-limb pain. Brit. Med. J., **1**:299-308, (Feb. 7) 1953.
13. French, L. A.: Cordotomy in high cervical region for intractable pain. Jr.-Lancet, **73**:283-287, (July) 1953.
14. Fulton, J. F.: Recent advances in neurophysiology. J. Neurosurg., **11**:1-6, (Jan.) 1954.
15. Guidetti, B.: Tractotomy for the relief of trigeminal neuralgia; observations in 124 cases. J. Neurosurg., **7**:499-508, (Nov.) 1950.
16. Guillaume, J., and Mazars, G.: La cordotomie cervicale haute; son intérêt dans la chirurgie de la douleur. Presse méd., **59**:162-164, (Feb. 10) 1951.
17. Grantham, E. G.: Prefrontal lobotomy for relief of pain, with report of new operative technique. J. Neurosurg., **8**:405-410, (July) 1951.
18. Grantham, E. G., and Spurling, R. G.: Selective lobotomy in treatment of intractable pain. Ann. Surg., **137**:602-608, (May) 1953.
19. Harrmon, P. H.: Transabdominal extraperitoneal section of the obturator nerve trunk. J. Neurosurg., **7**:233-235, (May) 1950.
20. Howarth, J. C., and Gardner, W. J.: Transorbital leukotomy for pain of malignant disease. Cleveland Clin. Quart., **19**:140-143, (July) 1952.

21. Huber, K.: Ueber psychochirurgie. Wien. klin. Wchnschr., **62**:956-958, (Dec. 22) 1950.
22. Johnson, D. A., Roth, G. M., and Craig, W. M.: Orthostatic hypotension following chordotomy for intractable pain. Proc. Staff Meet., Mayo Clin., **27**:131-135, (March 26) 1952.
23. Kahn, E. A., and Rand, R. W.: On the anatomy of anterolateral cordotomy. J. Neurosurg., **9**:611-619, (Nov.) 1952.
24. Laine, E., and Soots: Indications and results of topectomy and leucotomy in the surgery of pain. Lille chir., **5**:230-234, (Sept.-Oct.) 1950.
25. LeBeau, J.: Experience with topectomy for the relief of intractable pain. J. Neurosurg., **7**:79-91, (Jan.) 1950.
26. LeBeau, J.: Surgical uncertainties of prefrontal topectomy and leucotomy; observations on 100 cases. J. Ment. Sc., **97**:480-504, (July) 1951.
27. Lyerly, J. G.: Prefrontal lobotomy for relief of intractable pain. Am. J. Surg., **81**:526-532, (May) 1951.
28. Mandl, F.: Chemical lobotomy for intractable pain. J. Int. Coll. Surg., **15**:276-280, (Mar.) 1951.
29. Mandl, F.: Further experience with frontal lobe infiltration cases of pain due to carcinoma. Wien. klin. Wchnschr., **64**:238-249, 1952.
30. McMurray, G. A.: Experimental study of a case of insensitivity to pain. A.M.A. Arch. Neurol. & Psychiat., **64**:650-667, (Nov.) 1950.
31. Miserocchi, E.: Cordotomy. Chirurgia, **6**:519-532, 1951.
32. Murphy, J. P.: Frontal lobe surgery in treatment of intractable pain, a critique. Yale J. Biol. & Med., **23**:493-500, (June) 1951.
33. Nulsen, F. E., and Grant, F. C.: Relief of pain in advanced carcinoma by prefrontal injection of procaine. A.M.A. Arch. Neurol. & Psychiat., **69**:653-654, (May) 1953.
34. Petit-Dutaillis, D., Messimy, R., and Berges, L.: Psychosurgery for intractable pain; study based on 57 cases. Sem. Hôp. Paris, **29**:3893-3903, (Dec. 6) 1953.
35. Poppen, J. L.: Discussion of paper by Scharff. J. Nerv. & Ment. Dis., **111**:254-257, (Mar.) 1950.
37. Rowe, S. N., and Moyar, J. B.: Experience with unilateral prefrontal lobotomies for pain. J. Neurosurg., **7**:121-126, (Mar.) 1950.
38. Scarff, J. E.: Unilateral prefrontal lobotomy for the relief of intractable pain; report of 58 cases with special consideration of failures. J. Neurosurg., **7**:330-336, (July) 1950.
39. Siris, J. H., and Kahn, J. W.: Management of intractable pain in peripheral vascular diseases. Am. J. Surg., **82**:260-262, (Aug.) 1951.
40. Smolik, E. A.: Lobotomy in management of intractable pain and narcotic addiction. Dis. of Nerv. System, **11**:327-331, (Nov.) 1950.
41. Spiegel, E. A., Wycis, H. T., and Freed, H.: Stereoencephalotomy: thalamotomy and related procedures. J.A.M.A., **148**:446-451, (Feb. 9) 1952.
42. Spiegel, E. A., and Wycis, H. T.: Mesencephalotomy in treatment of "intractable" facial pain. A.M.A. Arch. Neurol. & Psychiat., **69**:1-13, (Jan.) 1953.
43. Trimble, I. R., and Morrison, S.: Treatment of intractable pain of visceral origin. J.A.M.A., **148**:1184-1188, (Apr. 5) 1952.
44. Van Wagenen, W. P., and Liu, C. T.: Procaine block of frontal lobe white fibers as a means of predicting the effect of prefrontal lobotomy. J. Neurosurg., **9**:30-51, (Jan.) 1952.
45. Walker, A. E.: Neurosurgical treatment of intractable pain. Jr.-Lancet, **70**:279-282, (Aug.) 1950.
46. Walton, F. A.: Coeliac ganglion syndrome. Canad. M. A. J., **67**:342-346, (Oct.) 1952.
47. Williams, J. M., and Freeman, W.: Transorbital lobotomy in the relief of intractable pain. A.M.A. Arch. Surg., **63**:203-210, (Aug.) 1951.
48. White, J. C., Sweet, W. H., Hawkins, R., and Nilges, R. G.: Anteriolateral cordotomy: results, complications and causes of failure. Brain, **73**:346-367, (Sept.) 1950.
49. White, J. C.: Frontal leucotomy versus cordotomy for relief of pain. Surg. Gynec. & Obst., **92**:469-480, (Apr.) 1951.
50. White, J. C., and Sweet, W. H.: Effectiveness of cordotomy in phantom pain after amputation. A.M.A. Arch. Neurol. and Psychiat., **67**:315-322, (Mar.) 1952.

Thromboembolism and Anticoagulants In Surgery

EDWARD E. MASON, M.D.

IOWA CITY

THROMBOEMBOLISM continues to be a serious problem for the medical practitioner. The large number of papers written upon this subject, including the recent review by De Bakey,[1] illustrates the confusion which exists with regard to diagnosis and therapy. For those who accept the use of anticoagulants in the prevention and treatment of thromboembolism, certain basic rules have been established with regard to indications, contraindications, conduct of therapy, control of therapy by laboratory methods and the use of specific antidotes to the anticoagulants used. Since limitations on space will permit no more than a brief discussion of the rationale behind and the conduct of anticoagulant therapy, the reader is referred to the books by Jorpes[2] (1946), Shapiro and Weiner[3] (1949), and Marple and Wright[4] (1950) for a more complete discussion.

What is the incidence of thromboembolic complications in postoperative patients? Barker[5] states that approximately one in 100 patients has some manifestations of thrombosis or embolus. The incidence of fatal postoperative pulmonary embolism is approximately 0.2 per cent. At the State University of Iowa Hospitals, the mortality from pulmonary embolism following operations requiring anesthesia was 0.145 per cent during 1951 and 1952.

It is the objective of anticoagulant therapy to prevent or treat those alterations in the clotting mechanism which lead to thrombosis, thrombophlebitis and pulmonary embolism in order to prevent death and morbidity. This objective can be accomplished by preventing the blood from forming a fibrin clot. Fortunately, there are mechanisms other than the formation of fibrin which will prevent bleeding from small vessels and capillaries and which make possible the use of anticoagulants without the patient's invariably bleeding to death. One of them depends upon the formation of platelet thrombi which can effectively plug ruptures in small vessels. According to experimental work by Fulton,[6] the formation of hemostatic platelet plugs at points of blood vessel rupture is not prevented but actually is enhanced

Dr. Mason is a staff member of the Department of Surgery at the SUI College of Medicine.

by heparin, Dicumarol, tromexan and phenylindanedione.

The effectiveness of anticoagulant therapy in the prevention and treatment of thromboembolism is demonstrated best by an examination of those types of cases wherein a very high incidence of this condition exists without anticoagulant therapy. Murray and McKinsey[7] called attention to their experience of almost invariable recurrence and progression of thrombosis following resection of bowel for mesenteric thrombosis. Following the introduction of continuous postoperative intravenous heparin therapy in this type of patient, they were able to report six cases in a row in which no further progress of the mesenteric thrombosis occurred following resection. Barker[8] observed that in cases of nonfatal postoperative pulmonary embolism and infarction, there was a subsequent incidence of fatal embolus in 18.3 per cent of cases if anticoagulants were not used. In contrast, those cases having the same diagnosis but treated with anticoagulants had an incidence of fatal embolus amounting to 0.6 per cent.

Those who use anticoagulant treatment in preference to ligation do so either because, in their own experience or in the experience of others, ligation has failed to prevent embolism.[9] To prevent the embolization of clots from the pelvic veins, it is necessary to ligate the inferior vena cava. Even though ligation is used, anticoagulant therapy is sometimes indicated in order to prevent propagation of thrombi from the site of ligation itself. The morbidity of the postphlebitic syndrome must be considered.[10] A lower incidence of late postphlebitic complications can scarcely be expected from ligation than from anticoagulant therapy, since the very act of ligation tends to destroy, rather than to save, the deep veins as normal, functioning portions of the vascular tree. If the tendency to the formation of thrombi is due to an alteration in the coagulability of the blood, then ligation of any particular vein would seem to be a rather nonspecific sort of therapy. These, in brief, are the arguments for anticoagulant therapy in preference to ligation.

There are specific cases wherein ligation is preferable to the use of anticoagulants, as, for example, when anticoagulants are contraindicated and when septic thrombi are present. One of the chief disadvantages of anticoagulant therapy is the requirement for reliable prothrombin time determinations, not only during the week but on Saturdays and Sundays as well. Unfortunately, laboratories are frequently on a 40-hour week. The use of anticoagulants not only requires a familiarity with the method on the part of the physician but also calls for very close supervision.

INDICATIONS AND CONTRAINDICATIONS

There are all degrees of indication for the use of anticoagulants, from those cases in which the risk is very high without treatment, to those in which anticoagulant therapy is given purely as a prophylactic measure. If a patient has had a nonfatal pulmonary embolus and if obvious localizing signs are present in the legs, anticoagulants are certainly in order. When no localizing signs are present to explain the origin of the nonfatal pulmonary embolus, the diagnosis is not as certain, but the risk of anticoagulant therapy would seem to be much less than the risk of a fatal pulmonary embolus would be if such a patient were left untreated. Cases with phlebothrombosis or thrombophlebitis involving the deep veins of the legs should be treated not only for the purpose of preventing pulmonary embolism but for the prevention of the morbidity of postthrombotic edema, scarring, pigmentation, ulceration, pain and the other changes which make up the postphlebitic syndrome.

Cases which should be considered as candidates for prophylactic treatment have two or more of the following predisposing characteristics: (1) age over 50, (2) severe chronic illness, (3) severe sepsis from a subphrenic, pelvic or other abscess, (4) malignancy, (5) laparotomy, (6) pelvic surgery, (7) an extensive and radical operative procedure entailing excessive trauma to tissues, (8) splenectomy, (9) ulcerative colitis, (10) previous history of thromboembolism, (11) confinement to bed, and (12) a recent bout of cardiac decompensation. There are no special tests which can effectively screen out those patients who are likely to have thromboembolic complications.

There are also certain contraindications to the use of anticoagulants, and again they are relative. Fairly absolute contraindications include: (1) recent surgery of the central nervous system, (2) ulcerated lesions in the gastrointestinal tract (especially if there has been recent bleeding), (3) blood dyscrasias, and (4) hypoprothrombinemia secondary to malnutrition or liver disease. Less strict contraindications are: (1) liver disease, (2) kidney disease, (3) hypertension, and (4) diabetes. Anticoagulant therapy is contraindicated in any patient who must have major surgery in the immediate future, or who is to have needles inserted into his paravertebral or retroperitoneal areas. Fatalities are known to have resulted from the use of sympathetic block in the presence of anticoagulant treatment. If a patient with thrombophlebitis is thought to have an element of vasospasm and if anticoagulants are being used, a vasodilator drug can be used in preference to sympathetic block.

TREATMENT

Heparin is the drug of choice wherever an immediate effect is desired, and it can be given either by intermittent intravenous injection or by continuous administration in intravenous fluids. When the continuous method is used, as in the

treatment of a patient who has had bowel resection for a mesenteric thrombosis, 300 mg. are placed in a liter of 5 per cent glucose, and the rate of administration is adjusted so that the clotting time remains between three and four times normal. The majority of cases of thromboembolism can be satisfactorily treated by the administration of 150 mg. of heparin as an initial intravenous dose, followed by 50 mg. every four hours. Clotting time determination should be made three hours following a dose and again just before the next dose, and the dosage should be increased or decreased as is necessary in order that the clotting time may be elevated at three hours, but normal just prior to the next dose at four hours. The chief drawback to heparin therapy is its expense (about $12.00 a day for the heparin alone). Dicumarol is inexpensive, but the laboratory control incident to its use may add considerably to the cost of anticoagulant therapy. Some laboratories have a maximum fee for a series of prothrombin times, regardless of how many days the patient is treated. If heparin is used, the clotting times are usually determined at the bedside by the attending physician. A number of long-acting heparin preparations are available, but because of variabilities in absorption rate, they are less predictable in their effects.

If prolonged anticoagulant therapy is indicated, it is preferable to use intermittent intravenous heparin for the first day, or until a satisfactory prothrombin insufficiency is obtained by the use of Dicumarol or related drugs. In such a case, the average initial dosage of Dicumarol is 300 mg. On the second day, 200 mg. are given, and on the third day usually 100 mg. Then, 50 to 150 mg. of Dicumarol are given on each succeeding day, depending upon the prothrombin level. It is important that no dose of Dicumarol be given prior to the discovery of the patient's prothrombin time for that day. If "prothrombin time" is reported by the laboratory, the therapeutic range is between one and a half and three times the control prothrombin time (when one uses the standard Quick one-stage prothrombin determination). One's objective is to give that amount of Dicumarol which will maintain the prothrombin time above two, but not above three times that of the control. If the laboratory reports its results in "percentage of normal prothrombin," then the prothrombin level should be maintained below 30 and above 10. Heparin is discontinued as soon as the prothrombin time reaches the therapeutic range. One of the disadvantages of Dicumarol is that it takes 48 to 72 hours to produce a therapeutic effect. For that reason, the shorter-acting tromexan can be used during this initial period to shorten the time that heparin must be given. A single dose of between 1200 and 1500 mg. of tromexan is given on the first day, along with the 300 mg. dose of Dicumarol and intermittent intravenous heparin therapy. No more tromexan is given, and the usual 200 mg. dose of Dicumarol is given on the second day. The tromexan will usually produce a therapeutic hypoprothrombinemia in 18 to 24 hours, and this effect will usually last until the Dicumarol is effective.

If prophylactic treatment is decided upon, Dicumarol alone may be used. I have had no experience with the use of tromexan[11] or phenylindanedione[12] as the sole anticoagulant. Because these drugs act more quickly and for a shorter period of time, their effectiveness disappears sooner after therapy is discontinued. They are more difficult to use if single doses are given each day, but if given in divided doses, they are said to be very efficacious.

With all of these drugs, the therapy is continued until the patient has (1) ceased to have any signs or symptoms of phlebothrombosis or thrombophlebitis, (2) has begun to walk, and (3) has reached the period in his convalescence when the physician feels that no further danger of thromboembolic phenomena exists. Usually a week to ten days following disappearance of all signs and symptoms is adequate.

The complications of anticoagulant treatment are those of bleeding, but they will be frequent and severe only if the physician ignores contraindications to therapy and the necessity for careful supervision and reliable laboratory control. A certain small number of cases of hematuria, bleeding from the gastrointestinal tract and internal bleeding will occur in patients treated with anticoagulants. Minor bleeding has occurred in approximately one in 25 cases treated postoperatively.[5] Serious bleeding is to be expected in one in 50 cases, and fatal hemorrhage has occurred in one in 1,000 cases.[5] Fatal hemorrhage in carefully controlled cases is usually found to be the result of an unrecognized source of bleeding which would have been a contraindication for the use of anticoagulants. The majority of fatalities reported (and some of those that we hear about that are not reported) are the direct result of gross negligence on the part of those administering the drug. Any patient who is given anticoagulant drugs without proper laboratory control is exposed to the risks of uncontrollable hemorrhagic disease, just as were the cattle that developed this disease in 1920 from the dicumarin compounds in spoiled sweet clover.

CONTROL OF THERAPY

If the physician wishes to administer anticoagulants when reliable prothrombin times are unavailable, he must resort to the use of heparin. Jorpes[2] and Bauer[10] report that heparin has been used with good results and without complications even though no clotting times were determined. On the other hand, Murray[7] states, "It is of no use whatever to give heparin blindly and not know that the effect is being obtained." Most physicians in this country who are using heparin

obtain clotting times at three hours and shortly before the next dose during the first few intravenous injections of heparin, and then obtain occasional spot checks if it is continued for more than a day. When Dicumarol or any such antiprothrombin drug is used, prothrombin determinations must be made and the results must be known to the physician before each and every dose of the drug, including the initial dose. It is of great help if a graph is maintained showing the amount of Dicumarol given and the ratio of the patient's prothrombin time to the control prothrombin time each day. By studying the response of the individual patient to the amount of drug given, the physician can judge the patient's requirements accurately and thereby can obtain a constant elevation of prothrombin time to the therapeutic range. It is helpful not only to know the prothrombin level for the day but also to determine from the graph whether this level is rising or falling, and the rate of such change.

Anticoagulant therapy has been made safer by the addition of protamine and vitamin K_1 to our therapeutic armamentarium. With 50 mg. of protamine, one can completely neutralize the effect of 50 mg. of heparin that has been given a short time earlier.[13] Actually, because of the rapid elimination of heparin from the body, protamine is seldom needed. If prothrombin levels become excessive and bleeding occurs, the prothrombin can be returned to normal by the administration of 50 mg. of vitamin K_1.[14] Bleeding usually stops within a few hours, and the prothrombin level usually has reached normal by the end of six hours. Since the introduction of K_1 in these high doses, it is no longer necessary to resort to the administration of fresh blood in order to obtain prothrombin. Blood should be given, however, if it is needed for replacement and for the reestablishment of normal volume. An occasional patient will over-react to the initial dose of Dicumarol and/or tromexan, or will develop an excessive prothrombin deficiency during the course of therapy. No bleeding may result from this. The elevated prothrombin time will eventually drop to a desired therapeutic level, provided no further medication is given. It is considered risky, however, to allow the prothrombin time to remain in excess of three times the control or for the prothrombin per cent to be less than ten, and such instances of excessive medication or excessive response to medication should be treated by small doses of vitamin K_1. The administration of 0.5 to 2.5 mg. of vitamin K_1 intravenously will usually restore the prothrombin to the therapeutic range.[14] As soon as the prothrombin concentration has fallen to the desired level, Dicumarol administration can be resumed at appropriately reduced doses. Vitamin K_1 should be given intravenously at rates of 10 mg. per minute or less. If it is given faster than that, there may be symptoms of sweating, flushing and dyspnea. No other reaction has been reported from this material. Vitamin K_1 is reported to be equally effective in counteracting the prothrombin deficiency caused by Dicumarol, tromexan and phenylindanedione.

BIBLIOGRAPHY

1. DeBakey, M. E.: Critical evaluation of the problem of thromboembolism. Int. Abs. Surg., **98**:1-17, (Jan.) 1954.
2. Jorpes, J. E.: Heparin in the treatment of thrombosis. 2nd. ed., London, New York and Toronto, Oxford University Press, 1946.
3. Shapiro, S., and Weiner, M.: Coagulation, thrombosis and Dicumarol. New York, Brooklyn Medical Press, 1949.
4. Marple, C. D., and Wright, I. S.: Thromboembolic conditions and their treatment with anticoagulants. Springfield, Charles C Thomas, 1950.
5. Allen, E. V., Hines, E. A., Jr., Kvale, W. F., and Barker, N. W.: Use of Dicumarol as an anticoagulant: experience in 2,307 cases. Ann. Int. Med., **27**:371-381, (Sept.) 1947.
6. Fulton, G. P., Akers, R. P., and Lutz, B. R.: White thrombo-embolism and vascular fragility in the hamster cheek pouch after anticoagulants. Blood, **8**:140-152, (Feb.) 1953.
7. Murray, G., and MacKenzie, R.: Effect of heparin in portal thrombosis; its use in mesenteric thrombosis and following splenectomy. Canad. M.A.J., **41**:38-40, (July) 1939.
8. Barker, N. W., Nygaard, K. K., Walters, W., and Priestley, J. T.: Statistical study of postoperative venous thrombosis and pulmonary embolism. Proc. Staff Meet. Mayo Clin., **15**:769-773, (Dec. 4) 1940.
9. Roe, B. B., and Goldthwait, J. C.: Pulmonary embolism: statistical study of postmortem material at the Massachusetts General Hospital. New Eng. J. Med., **241**:679-686, (Nov. 3) 1949.
10. Bauer, G.: Heparin therapy in acute deep venous thrombosis. J.A.M.A., **131**:196-203, (May 18) 1946.
11. Scarrone, L. A., Beck, D. F., and Wright, I. S.: Comparative evaluation of tromexan and Dicumarol in the treatment of thromboembolic conditions—based on experience with 514 patients. Circulation, **6**:489-514, (Oct.) 1952.
12. Preston, F. W., O'Connor, W. R., Thompson, C. E., and Christensen, E. N.: Clinical use of the anticoagulant phenylindanedione (74 cases). Circulation, **6**:515-519, (Oct.) 1952.
13. Chargaff, E., and Olson, K. B.: Studies on chemistry of blood coagulation: VI. Studies on action of heparin and other anticoagulants: influence of protamine on the anticoagulant effect in vivo. J. Biochem., **122**:153-167, (Dec.) 1937.
14. Rehbein, A., Joretzki, A., and Habif, D. V.: Response of dicumarol-induced hypoprothrombinemia to vitamin K_1. Ann. Surg., **135**:454-469, (Apr.) 1952.

CHANGE IN MEDICAL SCHOOL RULES ADVOCATED

State and city medical schools should relax their restrictions on admitting students from limited geographical areas, it was contended in an editorial in the November 20 issue of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. Such limitations may represent "a shortsighted policy that is a disservice both to the state and to the school."

"With roughly one-third as many applicants per vacancy to choose from as the other schools, the tax-supported schools are often placed in the unfortunate situation of having to select inferior applicants or fail to fill their quotas," the editorial said.

In general, medical schools are flunking out no more than 5.1 per cent of their freshmen, as contrasted with 9.4 per cent fifteen years ago. But as a result of having been forced to accept considerable numbers of inferior candidates, the flunk-out rate in tax-supported schools is twice as great as it is in private ones. As a result, money is being wasted.

"If state and city schools would relax their restrictions even to the point of choosing a certain percentage of their students from other areas (at a slightly higher rate of tuition and with a certain amount of reciprocity) this would have a salutary effect," the editorial concluded.

Early Postsurgical Ambulation

LOUIS T. PALUMBO, M.D.

DES MOINES

Though, since World War II, the practice of early ambulation following major surgery has become widespread, its important beneficial effects apparently are not fully recognized or appreciated throughout the country. It deserves to be employed on a greater scale. This method of management for surgical patients is by no means new. It was reported by Ries, in 1899,[10] and some credit for its adoption in this country should be given to the work and reports of Leithauser (1941).[2, 3]

Hesitancy on the part of the physician and surgeon in permitting early rising following surgery is due, in most instances, to their unfounded idea that it may result in interference with wound healing, in a greater chance of wound disruption and evisceration, and in unfavorable physiological disturbances and psychosomatic reactions. Actually, the opposite is true, for prolonged bed rest, besides incurring additional expense for the patient, results in some undesirable physiologic changes.

Through disturbances in metabolism, prolonged bed rest produces weakness and loss of tone of both smooth and skeletal muscles, loss of calcium and nitrogen from the body, reduced vital capacity, decreased cardiac output, slowing of circulation, and a delay in wound healing. These changes may result in an increased incidence of complications of the gastrointestinal tract, as evidenced by ileus, constipation, nausea, vomiting, and/or decrease or loss of appetite. Pulmonary complications such as pneumonia and atelectasis may develop as a result of prolonged recumbency and lack of breathing exercises. These difficulties include poor pulmonary ventilation, decreased pulmonary circulation, retention of broncho-alveolar secretions secondary to depression of the cough reflex, and inhibition of the thoracic and abdominal muscles on account of pain. The slowing of the peripheral circulation predisposes to thombophlebitis and phlebothrombosis, which may result in pulmonary embolism or infarction.

On the other hand, early ambulation enhances wound healing and reduces other complications which may occur in the gastrointestinal tract, in the cardio-pulmonary and in the peripheral-vascular system. In addition, such a program is a great morale booster, it brings about a more rapid rehabilitation of the patient, it shortens his hospital stay, and it facilitates a better utilization of existing hospital beds.[7, 8]

The patient should be encouraged to get out of bed before the end of the day on which he had his operation, or on the first day thereafter, and he should be permitted to stand, walk and sit. Deep-breathing and leg exercises should be instituted immediately after the patient recovers from the anesthetic, and should be continued, along with the other activities, increased in duration, during the succeeding days of his postoperative hospitalization.

In practically all major surgical cases since 1946, we at the Des Moines Veterans Administration Hospital have carried out an active program of early ambulation with the help and cooperation of our Department of Physical Medicine and Rehabilitation. A carefully conducted survey of the results in about 4,000 cases was made by several members of our staff in 1953.[4, 7, 8] According to that study, all types of complications—including those of the wound, as well as those of the pulmonary, gastrointestinal, vascular and urinary systems—occurred twice as frequently in the group of patients who were ambulated late. Getting patients out of bed early did not increase the incidence of postoperative hernia. Even in cases of inguinal hernia, a recent study of 1,300 cases revealed no substantial difference in the rate of recurrence as between the early and the late ambulatory groups.[5, 6, 9]

SUMMARY

It is apparent that early ambulation has many beneficial effects upon the postsurgical patient. The complication rates in all categories can be markedly reduced without any undesirable effects upon the patient in general or upon his wound, and without significantly increasing the chances of mortality. Such a program, when properly conducted and supervised, is a great factor in the rapid rehabilitation of the patient, it results in a great monetary saving to him, to the hospital and to industry, and it permits a greater utilization of existing hospital beds. A more widespread adoption of an early ambulatory program in the care of the surgical patient appears warranted, since it is both anatomically and physiologically a sound policy.

REFERENCES

1. Katz, I. A.: Early ambulation in the management of the surgical patient (A review of the literature), Surg. Staff Meet., Veterans Hosp., Des Moines, 4: (No. 4, Nov. 1, 1950), 39 pp.

2. Leithauser, D. J.: Early ambulation and related procedures in surgical management. Springfield, Illinois, Charles C Thomas, 1946.

3. Leithauser, D. J.: Rational principles of early ambulation, J. Internat. Coll. Surgeons, 12:368-374, (May-June) 1949.

Dr. Palumbo is chief surgeon at the Veterans Administration Hospital in Des Moines.

4. Palumbo, L. T.: Biliary tract calculi and associated disease, Postgraduate Med., 10:370-376, (Nov.) 1951.
5. Palumbo, L. T., Paul, R. E., and Emery, F. B.: Results of primary inguinal hernioplasty, A.M.A. Arch. Surg., 64: 384-394, (March) 1952.
6. Palumbo, L. T., and Paul, R. E.: Effects of early ambulation in primary inguinal hernioplasty, Am. Surgeon, 18: 1128-1131, (Nov.) 1952.
7. Palumbo, L. T., Paul, R. E., Katz, I. A., and Mazur, T. T.: Effects of early postoperative ambulation, Postgrad. Med., 13:206-209, (Mar.) 1953.
8. Palumbo, L. T., Samberg, H. H., Paul, R. E., Katz, I. A., and Mazur, T. T.: Effects of early and late ambulation upon the surgical patient, Am. J. Surg., 85:544-551, (Apr.) 1953.
9. Palumbo, L. T., Paul, R. E., and Mighell, S. J.: Primary inguinal hernioplasty. A study of 1375 cases, S. Clin. North America, 34:567-578, (Apr.) 1954.
10. Ries, E.: Some radical changes in after treatment of celiotomy cases, J.A.M.A., 33:454-456, (Aug. 19) 1899.

Dizziness of Obscure Etiology

C. M. KOS, M.D.

IOWA CITY

> ". . . *The physician who cannot inform his patient what would be the probable issue of his complaint, if allowed to follow its natural course, is not qualified to prescribe any rational plan of treatment for its cure.*"[1]

The word *dizziness* is the victim's description of positional instability in action or at rest. The complaint has come to take its place among the more common symptoms encountered in the practice of medicine. Its connotations excite a variety of diagnostic considerations and frequently necessitate a series of examination procedures which are time-consuming and complex. The examiner must distinguish vertiginous dizziness or true vertigo from other impressions of dizziness. Despite a thorough search for the inciting feature of such disturbances of equilibrium, a definite cause is seldom detected.

"Dizziness" frequently is an emotionally generated symptom, and as such it may be regarded as self-inflicted. Anxiety, tension states, mental depression, suppressed anger, resentment and fatigue are some of the precipitating factors. Actually, *dizziness* may be only one of the many physical expressions of psychogenic turmoil, among which may be included some types of vasomotor rhinitis, migraine headache, certain variations of facial pain, globus hystericus, esophageal cardiospasm, functional aphonia, gastric ulcer, spastic colon, ulcerative colitis, angioneurotic edema, urticaria and perhaps a number of other dermatologic lesions.

In the background of many of these functional aberrations is the compelling suggestion that two factors combine to produce them: *stress,* whether psychic or somatic, and the *reaction pattern* or *predisposition* of the patient to his intrinsic as well as to his extrinsic environment. Stress is the trigger mechanism, and the reaction pattern determines the location, character and intensity of the expression.[2]

Perhaps primitive man expressed his sudden anger with a quick blow, his lust with instant rape, his fear with an immediate scream and his sorrow with satisfying sobs and breast beating. Those were juvenile behavior patterns, but the catharsis of emotions took place through appropriate and expressive violence. But modern man, sophisticated and chained to routine and civilized mores by his conscience, by his dignity and by his ambitions that require diplomacy, feels guilty and embarrassed when his feelings urge him toward primitive physical action of these sorts. Accordingly, he represses his inclinations toward outward violence and, instead, inflicts emotional punishment upon himself. The injury may excite a vasomotor storm, the consequence of which frequently is "dizziness."

In other instances, the symptom may be a reflection of degeneration, in which the ravages of time exert the inevitable effects of the processes of aging. It may be that this type of "dizziness" is a warning of the need for curtailing or modifying activities to which the patient has been accustomed.

In those instances in which the "dizziness" does not indicate a shortening of the patient's life, and when no cause can readily be ascribed for it either by otoscopic or neurologic examination, such symptoms as vertigo, tinnitus, hearing loss, nystagmus and associated autonomic phenomena combine to make up a clinical disorder that is generally called Ménière's symptom complex.[3]

There are variations of this complex which often trace a symptomatic pattern upon which one can place relatively high diagnostic and prognostic value. Detailed history, physical examination and functional tests have varying importance in particular cases. The results often resolve into discrete categories suggesting an acceptable operational classification for diagnosis, prognosis and treatment that the expression *Ménière's symptom*

Dr. Kos is a staff member in the Department of Otolaryngology and Maxillofacial Surgery at the College of Medicine at the State University of Iowa.

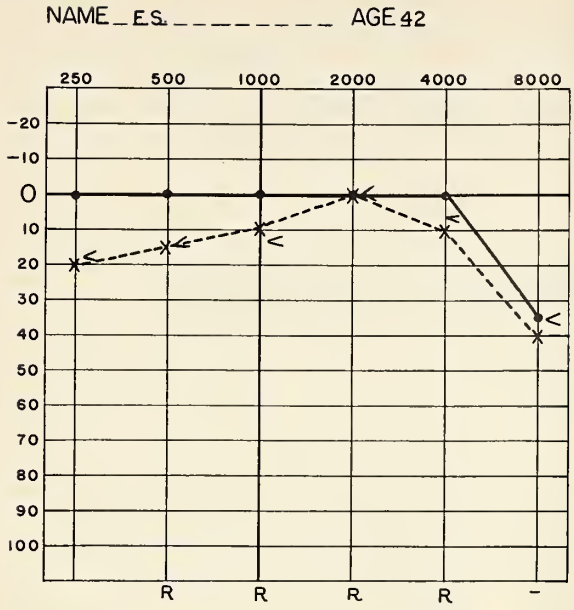


Fig. 1. Labyrinthine hydrops. Air and bone conduction equally depressed. ... × ... = Left; ... • ... = Right.

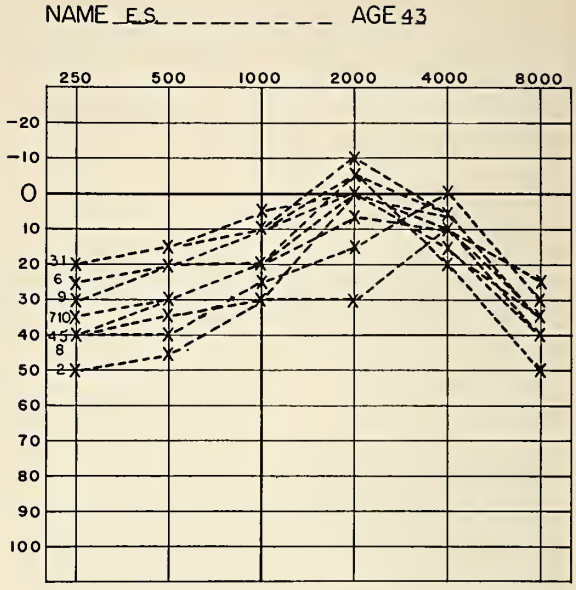


Fig. 2. Labyrinthine hydrops showing fluctuation of hearing during a period of nine months. ... × ... = Left ear.

complex does not clearly define. For it is a catch-all designation that establishes vertigo as the cardinal symptom and hence directs attention to vestibular function tests, instead of to the cochlear changes which frequently are far more significant. Next to the clues given in the history, the function of hearing is the most important in establishing a useful classification. After an evaluation of the "dizziness" complaint in 364 patients during the past eight years, and the correlation of the pertinent laboratory data, it has become apparent that these disturbances may be attributed to vasomotor irregularities and cytochemical alterations involving both oxygen and nutritional transport to the functional segments of the temporal bone.[4, 5, 6] The trigger mechanism, other than the emotional ones, may be remote foci of infection, metabolic deficiencies, endocrine disorders, drug or chemical intoxication, blood dyscrasia and atherosclerosis. Whatever the initial cause, their ultimate circulatory effect seems to be the same. Fundamentally, these changes consist in some degree of arteriolar spasm and capillary dilation, followed by a slowing of the blood stream, increased capillary permeability with resultant tissue anoxia, and formation of interstitial edema.[2]

LABYRINTHINE HYDROPS (MENIERE'S DISEASE)

The duration of these changes and the extent to which they affect the labyrinth suggest three principal clinical classifications of so-called "idiopathic dizziness."

The dizziness of labyrinthine hydrops (Ménière's disease) is a spontaneous rotatory or spinning sensation, sudden in onset and aggravated by motion, which lasts from a few minutes to several hours.[7, 8] The victim remains conscious and afterwards is usually able to give a detailed description of the attack. However, in some instances, the patient is so terrified and preoccupied with efforts to maintain balance that some essential features of the experience may escape his detection. Its spontaneous, paroxysmal course is punctuated by varying intervals of well-being, during which the general sensory and motor functions seem to be normal except for residual hearing impairment and tinnitus. The hearing loss is of the inner-ear type and, early in the disease, involves principally the low tones. Eventually, the acuity for all frequencies may be depressed. (Figure 1) Tinnitus is often described as a roaring, buzzing or sizzling noise in the ear. Its intensity rises and falls in some relation to the vertiginous episodes.

One of the characteristics of labyrinthine hydrops is the fluctuation of hearing acuity during its initial phases. (Figure 2) If the hearing loss is limited to frequencies below 1,000 cycles and does not exceed 20 decibels, it may return to normal. Otherwise, recurrent attacks apparently introduce the effects of chronic ischemia, with accompanying elevation of the threshold for high frequencies and a permanent residual hearing impairment, even though the threshold may continue to fluctuate. (Figure 3)

Attacks vary considerably in duration, intensity and frequency, and they may recur for a period of several years without severe deterioration of either cochlear or vestibular function. A relatively

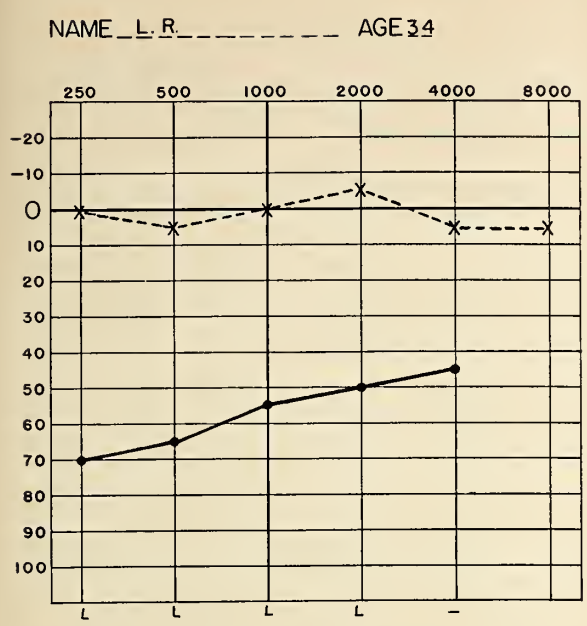


Fig. 3. Labyrinthine hydrops combined with labyrinthine ischemia. ... × ... = Left; ... • ... = Right.

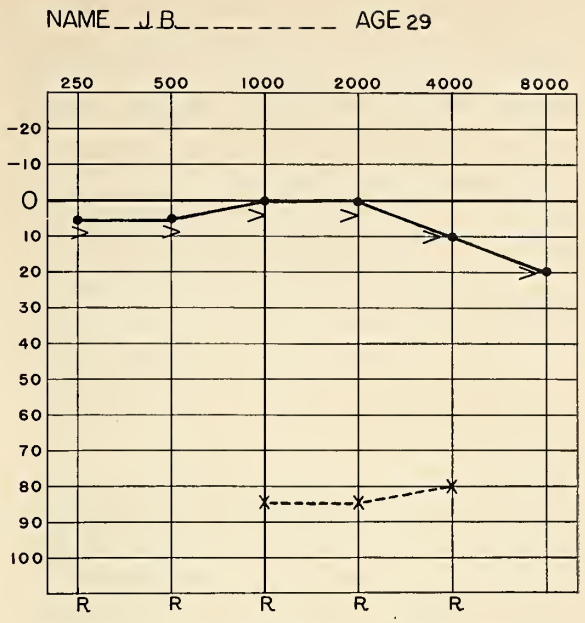


Fig. 4. Rapidly progressive labyrinthine hydrops with severe destruction of cochlear function. ... × ... = Left; ... • ... = Right.

rare variation, however, is one having a rapidly progressive course and complete destruction of one or both functions. (Figure 4) Paroxysmal dizziness may occur without evidence of hearing loss, and, contrariwise, at least temporarily a fluctuating inner-ear deafness may occur without dizziness. Such episodes usually eventuate in the more familiar combination of effects.

Recruitment is an interesting feature of labyrinthine hydrops.[9] However it is not marked unless the hearing loss exceeds 20 decibels, and it is more evident at frequencies above 1,000 cycles per second. In some patients, recruitment has subsequently disappeared, possibly because the effects of chronic ischemia extended to the auditory nerve. On one occasion, marked atrophy of the auditory nerve was observed during an exploratory exposure in a patient suspected of having an acoustic neuroma.

During the acute episodes of "dizziness" nystagmus is usually noted to be in the direction opposite the ear most involved. Between attacks, spontaneous nystagmus is not present, and there is little or no alteration in vestibular function, as measured by the differential caloric tests, except for an occasional unilateral or comparative bilateral hypoactivity. This is especially true if the tests are done several days after the last attack. Labyrinthine hydrops affects young adults as well as those of more advanced age, but its highest incidence seems to be among those in the 35-45 age bracket.

LABYRINTHINE ISCHEMIA

The "dizziness" of labyrinthine ischemia varies from a partial turning or spinning sensation to one of oscillation and uncertainty of posture or position. Although emotional disturbances and fatigue may exert an adverse influence on the progress of the degenerative process, the "dizziness" occurs, not as distinct, spontaneous episodes, but rather as superimposed exacerbations on a persistent unsteadiness or locomotor instability. Quick head movements, sudden postural changes or certain positional attitudes are definite exciting factors. Intermissions of freedom from "dizziness" are experienced usually when the patient remains immobile or when he learns to avoid the positional attitude which brings on his discomfort. The slightest change in position is likely to bring on a sensation of falling which lasts a few seconds to a few minutes, or may be prolonged for hours. Occipital and bitemporal headaches are frequent. Such patients, from experience, move slowly, falter in their movements and frequently resort to the aid of a cane. The hearing loss, as distinguished from that observed in labyrinthine hydrops, is of the high frequency, inner-ear type, and may or may not exhibit recruitment, presumably depending on whether the end organ or nerve is primarily affected. (Figure 5) Hearing never fluctuates, but degenerates slowly to its ultimate level of depletion. The tinnitus is described as whistling, singing or squeaking, and sometimes is compared to the sound of a richocheting bullet.

A carefully taken history and painstaking inquiry will often reveal that labyrinthine ischemia is influenced by diurnal physical activity. One patient may complain that "dizziness" is worse in the morning, but is overcome after a few hours

of exercise consisting of nothing more than the usual routines of the day. Another may complain that his "dizziness" is worse in the afternoon or evening when he is tired and somewhat exhausted from his usual day's activity. Frequently, the afternoon sufferer states that he tires easily, but laments his inability to sleep at night. These are important clues to therapeutic management and symptomatic prognosis. This clinical picture indicates a slowly progressive disintegration of reflexes because the circulation is providing less and less of the nutritive elements necessary for the maintenance of efficient and effective labyrinthine activity. As the cause of this "dizziness,"

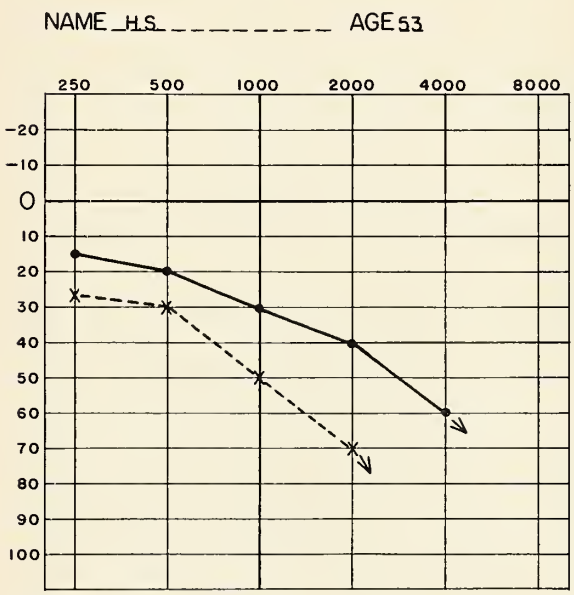


Fig. 5. Labyrinthine ischemia. ... × ... = Left; ... • ... = Right.

vascular hypertension and hypotension have no significance, but arteriosclerosis is a commonly associated condition.

The span of life in which this type of "dizziness" most frequently appears is the one upwards of 45 years of age.

LABYRINTHINE APOPLEXY

Acute labyrinthine anoxia, such as occurs as the result of labyrinthine ablation, vascular occlusion or severe, prolonged vasospasm, is often difficult to differentiate initially from a severe attack of labyrinthine hydrops. However, the nature of the disturbance is eventually established by the persistence and intensity of both subjective and objective symptoms. The "dizziness" is a true vertigo, and its duration is at least three to four weeks, during which time it gradually diminishes in intensity. Depending on the age of the victim, varying degrees of recovery from "dizziness" follow. The older the patient, the less likely it is that complete compensation will take place. Young adults recover somewhat more rapidly and completely. In some individuals, vestibular excitation may be partially restored after many months, usually more than a year, but hearing is rarely recovered to any appreciable degree. (Figure 6) Tinnitus is invariably present and is high pitched.

Nystagmus is of the horizontal-rotary type, and the quick component is directed to the ear opposite the one involved. At first it is extremely active, but it slowly subsides and usually is not grossly present after three weeks, although sudden motion may still bring it out.

Vertigo and the tendency to sway persist longer, and in elderly people may never cease. The sensation of falling is toward the unaffected ear, and past-pointing and falling are toward the side of the involved ear. Isolated insults to either the cochlear or vestibular organ may occur with the same spectacular abruptness, but with exclusive symptomatic effects, respectively. During the past eight years, several young adults have been observed to suffer "apoplexy" of the vestibular organ with out appreciable hearing loss. (Figure 7)

Once the diagnosis of labyrinthine apoplexy is established, therapeutic management and prognosis are clearly indicated.

DIFFERENTIAL DIAGNOSIS

"Dizziness" of any description must be assessed in a variety of diseases which, if only temporarily, may mimic labyrinthine dysfunction. Among these are syncope, a clinical syndrome of multiple etiologies, multiple sclerosis, acoustic neuroma, meningioma, cardiovascular disease, intracranial tumors, aneurysms and cerebrovascular accidents. Differentiation usually is not difficult if particular attention is paid to the patient's description of his symptoms and if nothing less than a thorough examination is made, with the neurologic system kept under close scrutiny. One may need to conduct examinations repeatedly in order to ascertain a reliable diagnosis. He should never wave away a patient who is complaining of "dizziness," after merely assigning an inconclusive or vague label to his ailment. He should give him to understand that frequently an initial examination must be extended to serial observations and inspections, and that concern for his recovery does not end with the assigning of a name. The thoroughness of the examination will have considerable influence on prognosis and treatment.

PROGNOSIS

None of these lesions, if restricted to the peripheral labyrinthine vascular system, need be expected to have grave consequences, except for the effect they leave on the end organ. Prognostic pessimism should be judiciously avoided, for the natural anxiety of the patient may be aggravated to the extent that the effect on the circula-

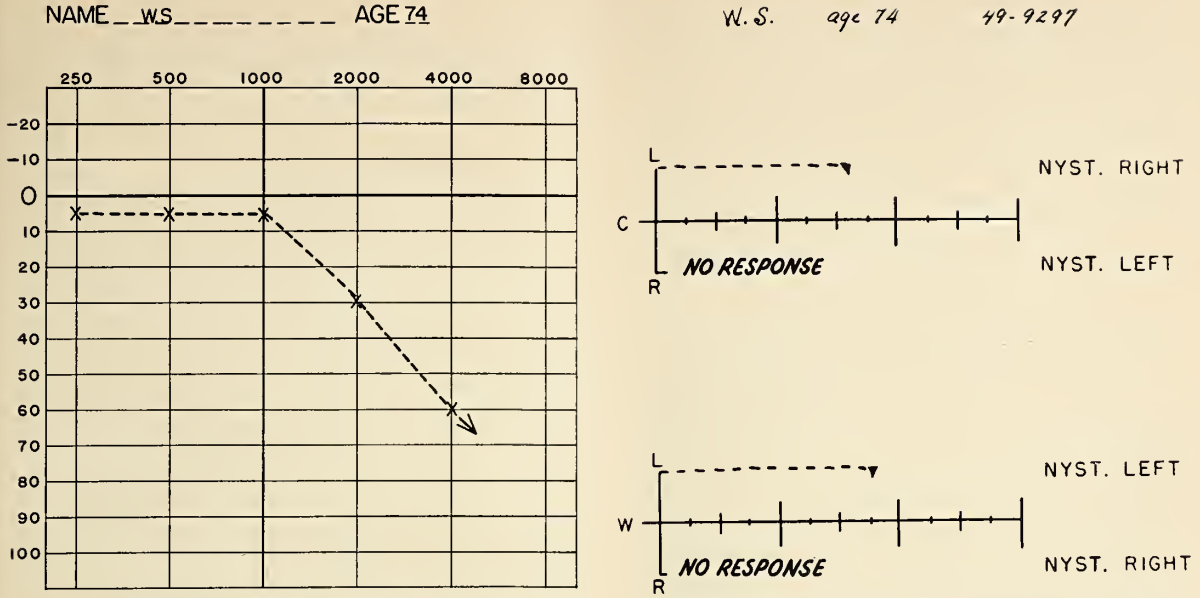


Fig. 6. A: Labyrinthine apoplexy. Hearing loss right. ... × ... = Left ear. B: Labyrinthine apoplexy. Vestibular impairment.

tory system induces further unfavorable results. The optimism of the patient, on the contrary, often constitutes necessary psychotherapy. Relief from the "dizziness" of labyrinthine hydrops may be expected with a high degree of confidence, but considerable doubt must be held as regards the restoration of auditory acuity. From labyrinthine ischemia, since it is a degenerative ailment, one cannot reasonably expect complete symptomatic relief. Labyrinthine apoplexy almost invariably results in severe impairment of one or both functional segments of the inner ear. Because of the effect of central nuclear adaptation or compensation, the degree of recovery from "dizziness" is dependent on the physiological age of the patient. Young patients seldom fail to recover their equilibrium completely, despite the permanent loss of vestibular excitation. Elderly patients often must contend with some slight equilibrial instability.

TREATMENT

The task of tracing therapeutic effects step by step through various stages is particularly confusing in the case of the dizzy patient. A long list of advocated methods of treatment, both medical and surgical, is impressive testimony to the fact that none have consistently measured up to the expectations originally held for them. This, in large part, is due to the failure to recognize the various clinical equivalents of Ménière's symptom complex. Also it is due to the spontaneously remissive nature of labyrinthine hydrops. Often, it is almost impossible to distinguish between actual therapeutic effect and spontaneous, coincidental improvement.

In part, labyrinthine hydrops has its basis in the nature of the victim, for it is the result of predisposition as well as of stress. Labyrinthine ischemia is the reflection of chronic degenerative processes, with an individual predilection for the labyrinth. Labyrinthine apoplexy may be regarded as an acute destructive process.

Consequently, only labyrinthine hydrops gives any symptomatic indication of its reversibility, especially during its initial phases. This evidence of reversibility suggests that it may be treated prophylactically and symptomatically. Labyrinthine ischemia and apoplexy, however, can be treated palliatively, but not prophylactically, since it is not within the power of therapy to restore youth or irreversibily damaged tissue.

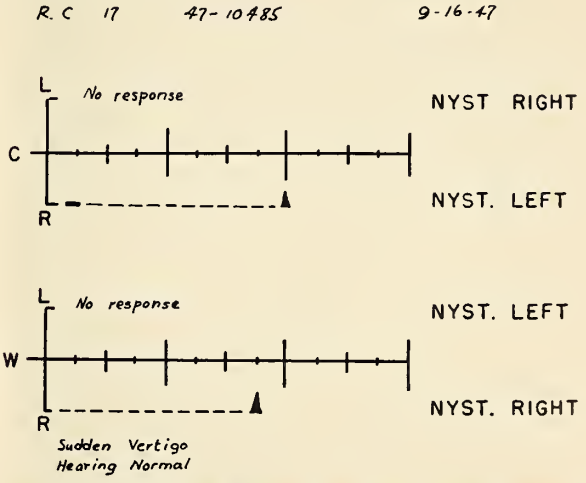


Fig. 7. Labyrinthine apoplexy left, with normal hearing.

It is on the basis of these observations and impressions that my concepts of therapy have developed. From time to time, various adrenalytic, sympatholytic and ganglion-blocking drugs have been used, but the hazards which accompany them have neutralized the limited therapeutic benefits observed. My experience with the conventionally advocated methods of treating labyrinthine hydrops have been discouraging. In one experiment, 32 patients were divided into four groups. Each individual received a lengthy discourse on the nature of his disturbance, the conditions which might influence it favorably or unfavorably, the expectation of relief and the anticipated results of therapy. Each was assured that he did not have a mysterious disease and that no evidence of tumor had been revealed. In addition, Group I received placebos. Group II received nicotinic acid by mouth, sufficient to cause flushing three to four times daily. The members of Group III were hospitalized and given 0.2 per cent procaine intravenously daily for seven days. Later they were treated as outpatients. Those in Group IV were put on a salt-restrictive diet and were given 9 Gm. of potassium chloride daily in three-day periods, for three months, with two-day omission intervals between periods.

All of these patients have been under observation for at least three years. Twelve of them have been examined regularly at 3- to 6-month intervals for seven years. There has been no significant difference in the therapeutic responses of the four groups. All the patients improved, except two. Those two have since been treated by labyrinthectomy with very satisfactory results. None of them is completely cured, but they no longer live in fear of recurrent attacks, and they have adapted themselves to useful and satisfying activities. Some of them continue to have brief disturbances, but they do not consider themselves incapacitated for the activities to which they have made adjustment. For example, a businessman has eliminated the elements of his widely diversified affairs which formerly caused him considerable anxiety. A physician has given up surgery, which always put him under unusual stress. A small industrialist has given his partners complete responsibility for management, but has continued to control and manipulate a large trust fund which gives him pleasure. A housewife, after years of living on the "wrong side of the tracks," now has a new house in the neighborhood of her choice. Achievement and acquisitiveness seem to be common urges among these people. Even in some remote way, money influences the clinical picture. Domestic frictions are sufficiently common in the general population so as to raise doubt as to their significance in the etiology and therapy of these difficulties. The common denominator in the treatment that we have been able to offer seems to have been a form of psychotherapy—the stimulation of the patient's confidence in the physician's efforts to help, and the explanation given him of the probable cause and effect of his symptoms.

Almost identical results were obtained in another group, who received various brands of antihistaminics. Undeserved credit is too often given to drugs, when the power of less tangible influences is left unacknowledged.

These experiences have led me to give considerable time to the patient who complains of "dizziness." He must be assured, if possible, that his "dizziness" is not a symptom of impending personal disaster and that he will live, despite his discomfort. Because of the anxiety and depression associated with this type of "dizziness," such mood-leveling or mood-stabilizing drugs as amphetamine sulfate combined with a barbiturate have been very useful as maintenance therapy. Atropine sulfate in doses of 1/100 to 1/150 grains, three to four times a day, and a brand of mephobarbital, ½ grains three times a day, have been effective. These may be combined with nicotinic acid for the impression which the peripheral vasodilating action makes on the patient. To abort acute attacks, 0.25 cc. of 0.2 per cent phenylephrine hydrochloride, given intravenously, often effects dramatic results in youthful patients. Such treatment may aggravate the "dizziness" of elderly patients, but atropine sulfate, 1/150 grains, administered intravenously has brought about favorable results. More recently, we have undertaken a clinical assessment of a brand of dimenhydrinate given intravenously in doses of 100 mg. in normal saline or five per cent glucose one or two times a day. The preliminary results have been impressively favorable.

Rarely is it necessary to resort to destructive methods such as surgery or streptomycin intoxication to bring the symptom of "dizziness" under control.

The patient suffering from labyrinthine ischemia may respond well to the above mentioned maintenance therapy. However, caution should be exercised in the case of advanced arteriosclerosis and hypertension. A salt-restricted diet seems to be of therapeutic value in many of these patients. If "dizziness" bothers the patient in the morning, a stimulant such as caffeine or amphetamine is prescribed on awakening. If it occurs in the afternoon, these same drugs are prescribed for that period, but one must take care that the stimulation does not interfere with sleep at night. In many instances any treatment fails to alleviate the symptoms.

Labyrinthine apoplexy presents the problem of palliative treatment until the intense "dizziness" subsides. The sedative and antispasmodic drugs may be helpful, but restoration of equilibrium is hastened and, I believe, more nearly complete if the patient is urged to exercise under supervision, at first slowly and briefly, but more vigorously as soon as orientation permits him to move without collapsing. The patient may be assured that he

must expect equilibrial discomfort for several days, but that improvement will be felt after eight to ten days and recovery will follow in two to three weeks.

CONCLUSION

It may be expected that the symptom of "dizziness," apparently of obscure etiology, frequently lends itself to the aforementioned classification. Variations in the clinical patterns described may be observed as the result of co-existing or overlapping effects of different stress factors acting simultaneously or in sequence. Hence, evidence of labyrinthine hydrops and ischemia may be present in the same patient at the same time. Either labyrinthine hydrops or ischemia may suddenly terminate in labyrinthine apoplexy.

Therapy includes allaying the patient's fears and carefully and simply explaining to him the probable nature of his condition. Of great therapeutic value are the thoroughness with which the examination is conducted and the assurance that the physician displays while reporting the results to the patient. An exhaustive search should be made to ascertain the existence of any diseased tissue which may constitute an additional burden on the individual's functional capacity.

The drugs that seem to be useful are those which act to regulate the peripheral vascular system and to govern prolonged emotional excursions. In order to facilitate adequate circulation, a vasopressor may be effective in one instance, and a vasodepressor or dilator in another. Emotional swings may require the counterbalance of sedation in one case and of euphoria in another, but there can be no sharply focused or consistently dependable treatment until we succeed in our attempts to understand the symptom.

BIBLIOGRAPHY

1. Adams, Francis: Genuine Works of Hippocrates, vol. I, p. 15. New York, Wm. Wood and Co., 1886.
2. Selye, Hans: Physiology and Pathology of Exposure to Stress. A Treatise Based on the Concepts of the General-Adaptation-Syndrome and the Diseases of Adaptation. Montreal, Acta, Inc., 1950.
3. Watkyn-Thomas, F. W., and Yates, A. Lowndes: Principles and Practice of Otology. London, Lewis and Co., 1932.
4. Hamberger, C. A., and Hyden, H.: Cytochemical changes in the cochlear ganglion caused by acoustic stimulation and trauma. Acta Oto-Laryngologica, Supplement LXI, 1945.
5. Tonndorf, J.: Combined effect of noise and hypoxia upon auditory threshold. USAF School of Aviation Medicine, project No. 21-1203-0001, Report No. 1, (March) 1953.
6. Tonndorf, J.: Combined effect of noise and hypoxia upon cochlear microphonics in the guinea pig. (to be published)
7. Ménière, P.: quoted by Williams, Henry L., In Ménière's Disease, American Lecture Studies No. 129. Springfield, Illinois, Charles C Thomas, 1952.
8. Hallpike, C. S., and Cairns, H.: Observations on the pathology of Ménière's syndrome. J. Laryng. and Otol., **53**:625-654, (Oct.) 1938.
9. Reger, S. N., and Kos, C. M.: Clinical measurements and implications of recruitment. Ann. Otol. Rhin. & Laryng., **61**:810-823, (Sept.) 1952.

State and Federal Help in

Programs for Older Citizens

F. W. PICKWORTH

DES MOINES

As a preface to this discussion, I must remind you that the mere fact of a person's aging does not make him a problem. Many people 65, 75 or even 85 years of age are leading active, normal and productive lives. The problem lies with the aged citizen who is ill or an invalid because of a chronic disease, mental illness, congenital defect or injury. The program of care for this problem group should primarily be one of medical care and skilled nursing attention, rather than merely of housing.

It should also be pointed out that although the aging citizens constitute a large portion of the victims of chronic illness, the terms *aged* and *chronically ill* are not synonymous. It is felt, nevertheless, that the program of care outlined for the chronically ill is applicable in large measure to the care of the aging citizen. Based upon that premise, this discussion will attempt to outline the activities of governmental agencies in providing better patient care for the chronically ill.

All governmental activity is directed at the provision of better patient care. This goal is being accomplished through three major activities:

1. Development of diagnostic and treatment methods through extensive medical research at the National Institute of Health, Bethesda, Maryland, and at medical centers throughout the United States

2. State hospital and nursing home licensing programs

3. Assistance and guidance to communities in constructing adequate health facilities under the Hill-Burton Act

On the first activity, that of developing better diagnostic and treatment methods through extensive medical research, there is sufficient material for an entire discussion period. It is sufficient to say that the present program of medical research and development is finding better diagnostic pro-

Mr. Pickworth, the director of the Division of Hospital Services of the Iowa State Department of Health, read this paper at the Third Annual Conference of the Institute of Gerontology, at Iowa City, October 11-12, 1954.

cedures and new medical treatment for many chronic diseases which, but a few short years ago were considered completely incurable. It is expected that, as the program continues, new medical diagnostic procedures and treatments will be found for many of the chronic ills that we consider incurable today. It is an excellent example of what can be done when unlimited funds and unlimited medical talents are turned loose on our present medical mysteries.

The second activity, that of licensing hospitals and nursing homes, is strictly a state government activity. The purpose of the licensing program is to enforce minimum standards of patient care in our medical care institutions. Annually, the Department of Health must inspect and license approximately 175 hospitals and 600 nursing homes. Unfortunately, because of restrictions on its budget and personnel, the licensing agency cannot police the many institutions 24 hours a day every day of the year. Therefore, the program must be primarily educational, rather than closely supervisory. Every effort is made to advise the operators of the institutions on the proper medical care technics and to instill in them the desire to provide proper patient care. Of course, any educational program is slow and tedious, and many times it moves much more slowly than the general public would like it to do. Some people criticize the Department for not closing an institution the minute some shortcoming in operation comes to light, and, on the other hand, many others criticize the Department for acting too hastily in enforcing minimum standards. The Department, thus, is in the unenviable position of being damned if it does and damned if it doesn't, and this situation can be rectified only through full support of the licensing program and the exercise of a considerable degree of forbearance both by average citizens and by their elected representatives.

The third activity, that of assisting and guiding the local communities in the construction of adequate medical facilities, is a federal program administered through state agencies. The Hospital Survey and Construction Act, Public Law 725, better known as the Hill-Burton program, was enacted in 1946 to provide financial assistance to local communities for the construction of five categories of medical facilities. These categories are: (1) acute short-term general hospitals, (2) mental hospitals, (3) chronic disease hospitals, (4) tuberculosis hospitals, and (5) public health centers. In the past seven years, Iowa has received approximately $9,500,000, which has been used to assist in the construction of 50 hospital projects with a total construction cost of approximately $30,000,000. All of the grants excepting three were for building short term general hospitals. The three exceptions were all mental hospital units in connection with general hospitals. Because only limited funds were available under the Hill-Burton Grants-in-Aid program, only about one half of the total volume of construction in hospitals in the State of Iowa during the last seven years was done with federal assistance. It is felt, however, that the Hill-Burton program stimulated the construction of acute short-term general hospitals both with and without that help.

The construction program in Iowa was typical of what was carried out throughout the United States. The Hill-Burton assistance, as a whole, has resulted primarily in the construction of acute short-term general hospitals. Although most state plans establish a high priority for mental hospitals, chronic disease hospitals, public health centers, etc., most communities' interests were in the development of acute short-term general hospitals, and since the construction grants were not definitely earmarked to a specific category, the program did not result in the construction of the specialized facilities. In an effort to rectify this situation, the last session of Congress passed the Medical Facilities Survey and Construction Act, Public Law 482, establishing grants for four types of facilities. These types are (1) chronic disease hospitals, (2) diagnostic and/or diagnostic and treatment clinics, (3) rehabilitation centers, and (4) nursing homes. The categorical grants for the first three types can be transferred for use in building another type of facility only if no approvable applications are received after a reasonable period of time has been granted possible applicants in the state. But rehabilitation facilities must be built from rehabilitation center grants, and no funds can be transferred into or out of that category.

NEW CATEGORIES FOR FEDERAL AID

Since experience has indicated that the public will buy the medical facilities needed to meet its medical requirements, provided that it becomes fully aware of what the facility is to do, it seems advisable at this point that I define the categories provided by the new Medical Facilities Survey and Construction Act:

1. A chronic illness hospital is a hospital the primary purpose of which is medical treatment of chronic illness, including the degenerative diseases, and which furnishes hospital treatment and care administered by or under the direction of persons licensed to practice medicine or surgery in the state. The term includes such convalescent institutions as meet the foregoing qualifications, but excludes tuberculosis and mental hospitals, nursing homes, and any institution the primary purpose of which is domiciliary care. Federal Grants-in-Aid may be used to build up to two beds per thousand population.

2. Diagnostic and/or diagnostic and treatment clinics are facilities providing community service for the diagnosis or treatment or both of ambula-

tory patients which are operated in connection with a hospital or in which patient care is under the professional supervision of persons licensed to practice medicine or surgery in the state. This includes outpatient clinics or departments of public or non-profit hospitals and may provide patient beds essential to certain diagnostic or treatment techniques, provided that the primary purpose of the facilities remains the provision of service for ambulatory patients. Federal funds may be used to provide up to one clinic per ten thousand population.

3. Rehabilitation centers are facilities which are operated for the primary purpose of assisting in the rehabilitation of disabled persons through an integrated program of medical, psychological, social, and vocational evaluation and service, under competent professional supervision. The major portion of each of these areas of evaluation and service must be furnished within the facility, and the facility must be operated either in connection with a hospital or as a facility in which all medical and related health services are prescribed by or are under the general direction of persons licensed to practice medicine or surgery in the state. Federal funds may be used to build up to one center per two hundred thousand population.

4. Nursing homes are facilities which are operated in connection with a hospital or in which care and medical services are prescribed by or performed under the general direction of persons licensed to practice medicine and surgery within the state, for the accommodation of persons who are not acutely ill and not in need of hospital care, but who do require skilled nursing care and related medical services. The term "nursing home" shall be restricted to those facilities providing community service and the primary purpose of which is to provide skilled nursing care or related medical service for a period of not less than 24 hours per day to individuals admitted because of illness, disease, or physical or mental infirmity. The term shall exclude those institutions the primary purpose of which is to provide domiciliary care. Federal funds may be used to build not to exceed three beds per thousand population.

Iowa's needs and those of other states

Like the basic Hill-Burton Act, the recent amendment provides that the state must first conduct a survey and take an inventory of existing facilities in the four categories to serve as a basis for the development of a state plan, before construction grants can be allocated to any specific project. To assist in this survey and plan development, the law provides for an appropriation of $25,000 to Iowa, which must be matched with an equal sum from state funds. Although, on the surface, this may seem a huge amount of money, it actually will permit only a very cursory type of state survey. The information obtained as a result of the state survey may be extremely useful to local communities, but should not be used as a substitute for a local survey. A portion of this survey has been finished by the state agency, and plans for its completion are presently being formulated. During the months of May and June, 1954, a survey of nursing home facilities was accomplished, and the findings have since been compiled with similar information from 35 other states.

A comparison of the information received from the 35 states reveals some definite relationships. The nursing home institutions were roughly divided into four types: (1) skilled nursing homes, providing skilled nursing care as their primary and predominant function; (2) care homes, with skilled nurses providing skilled nursing care, but only as an adjunct to the primary domiciliary or personal service function of the institutions; (3) care homes without skilled nurses, providing personal service with no skilled nursing care; and (4) sheltered homes, providing room and board with minimum supportive services. The tabulation that follows shows how Iowa compares with a projected national average.

Comparing the information regarding numbers of homes and numbers of patients with known information regarding certain contributing factors, one finds that the numbers of chronic disease hospital beds available in the state definitely reduces the demand upon nursing home beds. Further, the number of nursing home beds required in a state is directly affected by such factors as per capita income, agedness of population, proportion of the population living in urban areas, and relative availability of physicians and nurses in the state. In Iowa, the contributing factors are all favorable in establishing a demand for a large number of nursing home beds.

As pointed out earlier, it is absolutely essential that any community proposing a program of care for the chronically ill should survey local conditions that would affect it. The survey should determine the dimensions of the problem and the

	Iowa			*National*		
	No. of Homes	*No. of Beds*	*Beds/1,000*	*No. of Homes*	*No. of Beds*	*Beds/1,000*
Skilled Nursing Homes	278	6.303	2.4	7,000	450,000	1.1
Care Homes with Skilled Nursing	24	454	.2	2,000	80,000	.5
Care Homes without Skilled Nursing	771	3,471	1.3	7,000	110,000	.7
Sheltered Homes	631	6,170	2.4	9,000	80,000	.5

effect of contributing factors, and should plan for a coordination of facilities and services. The state agency will render such assistance to the communities as its finances and personnel will permit.

SUMMARY

In conclusion, it should be pointed out that there is no single all-purpose institution that can meet all of the needs of the aging citizen. Conquering the major health problems of today will require a network of general hospitals, special hospitals, clinics for ambulatory patients, nursing and convalescent homes, rehabilitation centers and home care programs, all working together. We feel that the problem must be attacked by means of a proper sequence of facilities, providing first for medical care, so that a definite program of medical and vocational rehabilitation can be instituted to reduce the residual numbers of people who must be provided terminal domiciliary facilities. Any community planning for the care of the aging citizen should consider four major factors in their proper order: (1) medical and vocational rehabilitation wherever possible, (2) employment or re-employment, (3) living arrangements and recreation, (4) economics. It will be noted that we have placed the matter of the economics of the entire program last in order of importance. It is felt that the proper attention to the first two items will definitely affect the total economic picture and, further, that in this country, in its present economy, we are economically able to do right by our aged citizen. If this country cannot do the job, then the worldwide problem is completely unconquerable.

State University of Iowa College of Medicine

Clinical Pathologic Conference

October 13, 1954

SUMMARY OF CLINICAL FINDINGS

A 67-YEAR-OLD WHITE farmer and livestock dealer began having fleeting knife-like pain in his left thigh and knee ten months before admission. His left leg became swollen one month later. Three days before admission, the swelling progressed to involve both legs to the groin. There was no loss of appetite, weight loss or shortness of breath. Past medical history was noncontributory.

Physical examination revealed a well developed and well nourished white male. His blood pressure was 140/90 mm. Hg., his heart and lungs were normal, his pulse was regular and his abdomen was normal. His prostate gland was 1+ enlarged, with a hard nodule in the right lobe. Bilateral browning and pitting edema was present in both legs below the knees. There was tenderness in the left calf, and pain on outward rotation of the left leg. Blood studies showed hemoglobin 14 Gm. per 100 cc.; red blood cell count 4.56 million per cu. mm.; and white blood cell count 5,900 per cu. mm. Differential count showed band cells 2 per cent; segmental polymorphonuclear leukocytes 63 per cent; lymphocytes 31 per cent; monocytes 3 per cent; eosinophils 1 per cent; total plasma proteins 6.51 per 100 cc.; albumin 4.11 Gm. per 100 cc.; globulin 2.40 Gm. per 100 cc.; calcium 8.2 mg. per 100 cc.; and phosphorus 2.6 mg. per 100 cc. No Bence-Jones protein was detected in the urine. X-ray films of the pelvis showed a lesion in the left ilium. Bone marrow aspiration revealed nothing unusual. The left ilium was biopsied, and a series of X-ray treatments to the region of the left ilium were given. The patient was then discharged from the hospital.

He returned three months later. He had been walking on crutches for the previous two weeks. Four days before admission, he developed a "full and crampy" abdominal pain, with radiation to the back and interscapular area and accompanied by nausea, but without vomiting. He had been able to eat nothing but toast and broth since the onset. There developed a numbness of the finger tips and toes, which progressed up the legs toward the groin. Three days later he noticed weakness of the lower extremities, and his legs buckled when he attempted to walk. There had been two bowel movements since the onset of the last illness. Examination of the abdomen showed it to be rotund and lax, with no peritoneal tenderness. The large bowel appeared distended to palpation and percussion. Peristalsis appeared to be within normal limits. The blood pressure was 130/80 mm. Hg. Generalized weakness and areflexia were noted. No pathological reflexes were detected. On the day of admission, he vomited an estimated 200 cc. of fluid. The day following admission, he passed some gas per rectum and retained some fluids. A scarlatiniform erythema appeared, and he complained of pain but little tenderness in the epigastrium. The white blood count was 12,400 per cu. mm. Flat X-ray films of the abdomen showed diffuse colon and small bowel dilatation, with no free air. Two days after admission, the

stomach was aspirated, and 600 cc. of clear, bloody fluid was removed. The abdomen was flat and silent, and the patient had no pain. The numbness of his hands and arms seemed to be worse. He was afebrile. Blood nonprotein nitrogen was 39 mg. per 100 cc.; creatinine 1.3 mg. per 100 cc.; carbon dioxide combining power was 86 vol. per 100; and chlorides were 559 mg. per 100 cc. His weakness progressed, and eight days after admission, the patient was placed in a respirator because of difficulty in breathing. Secretions in his upper respiratory tract had to be aspirated on several occasions, and 14 days after admission a tracheotomy and bronchial aspiration were done. The patient was in the respirator for five days, but no improvement in his general condition occurred. He spit up a considerable amount of a brownish fluid. The patient expired 18 days after admission.

CLINICAL DISCUSSION

Dr. Ignacio V. Ponseti, Orthopedics: The 67-year-old man whose case we are going to present for study today was in the hospital on two occasions and presented a different problem each time. On his first admission, his complaint was pain in the left leg which had been present for ten months, and edema which had been present for one month in the left leg and for two days in the right leg. The pain was most severe over the inner aspect of the knee. On physical examination, there were two main findings. One, the patient had pain and slight restriction of motion in the left hip joint, and there was pitting edema of the left lower extremity. Two, there was a hard nodule in the right lobe of the prostate. The remainder of the physical examination was noncontributory. The X-ray films which were taken will be discussed by Dr. Forbes.

Dr. Stephen A. Forbes, Radiology: The film of the pelvis facilitated a comparison between the bone detail of the right acetabulum and the decreased density, mottled radiolucency and sclerosis in the area of the left inominate bone. The impression is that of metastatic carcinoma from the suspected carcinoma of the prostate, though the possibility of a primary carcinoma elsewhere in the genito-urinary tract must be considered. A retrograde pyelogram outlined the calices and pelvis of each kidney without showing any abnormality. The kidney shadows themselves are also normal in outline. The presence of renal carcinoma seems excluded.

Staff member: Did he have an X-ray of the chest?

Dr. Ponseti: Yes, the report showed that he had a healthy chest.

A destructive lesion, then, was seen in the left ilium, adjacent to the cotyloid cavity. The patient had no fever. Blood changes were insignificant, and although the hip joint was tender, when he moved his hip there was not the severe pain and muscle guarding that is seen in patients with suppurative arthritis or tuberculous arthritis. From these clinical observations, an infection of the hip joint could be excluded. The lesion, as shown in the roentgenograms, does not appear to be infectious. Under these circumstances, the node palpated in the prostate seemed of great importance, for if it were malignant, then the diagnosis of metastases in the left ilium would be quite easy to contemplate. We sent the patient to Dr. Flocks, and he examined the prostate. Will you tell us what you found, Dr. Flocks?

Dr. Rubin H. Flocks, Urology: In the X-ray pictures, the lesion in the left ilium appears to have enough osteolytic phenomena so that it couldn't be metastatic from a carcinoma of the prostate. However we have seen patients with similar lytic changes that were due to carcinoma of the prostate, and there is enough osteogenesis to make us suspect that the lesion might be secondary to the one in the prostate. Our opinion at that time was that this hard area in the prostate could be carcinoma, but we were very much impressed with the osteolytic area and felt that since it was the patient's prime difficulty, it was the thing to be investigated first, rather than the prostate itself. We recommended that this lesion be examined prior to our doing anything further with the suspicious lesion in the prostate. If this patient were to have come to us at the present time, our procedure would have been entirely different. Thus we have an illustration of what can happen over a period of only a little more than 3½ years. Now we have developed our technic for biopsy of the prostate to such an extent that it is a relatively minor procedure, and it would be very easy, now, for us to make certain as regards the lesion of the prostate. But as it was, we simply had a clinical diagnosis, and since most of the patient's trouble had to do with his ilium, we felt that we should first discover whether or not that difficulty was metastatic from the prostate, metastatic from some other area, or due to a primary bone lesion. If we had made a prostate biopsy, I do not think it would have made any difference in this individual, since, as it turned out, a biopsy of the ilium showed a lesion that was not consequent to a carcinoma of the prostate; and so, as Dr. Ponseti will tell you, attention was turned toward that. Carcinoma of the prostate, even though it had been a suspicion because of the rectal findings, had required no special therapy because of the slowness of growth of that particular lesion, in contrast to the rapid growth of the lesion in the ilium.

Dr. Ponseti: I am sorry I did not put the question in the right way. The question was: "Was the node in the prostate a malignant or an inflammatory one?" I should have phrased it: "Without a biopsy, when you see a node like this in the prostate, can you be sure whether it is a carcinoma or an infection?"

Dr. Flocks: In a man of 67, the rectal finding of a hard area in the prostate raises several possibilities. Carcinoma of the prostate is the commonest lesion, a stone in the prostate can give that type of palpatory finding, and also chronic prostatitis, either tuberculous or non-specific, could do it. Because the X-ray picture showed no evidence of a stone, prostatic calculus was quite definitely ruled out. The differential diagnosis between an inflammatory lesion and carcinoma could only have been made by prostatic biopsy, which was not carried out.

Dr. Ponseti: So on the strength of the X-ray picture and the pain in the patient's left hip area, we took a biopsy of the left hip. An incision was made over the anterior aspect of the left ilium and hip joint, and some whitish tissue was obtained which was not particularly vascular. Dr. Carter, will you please discuss the slides?

Dr. John R. Carter, Pathology: This picture (Figure 1) shows a rather good example of a chondroscarcoma. Some areas are rather well differentiated, but a great many other areas do not show a high degree of differentiation.

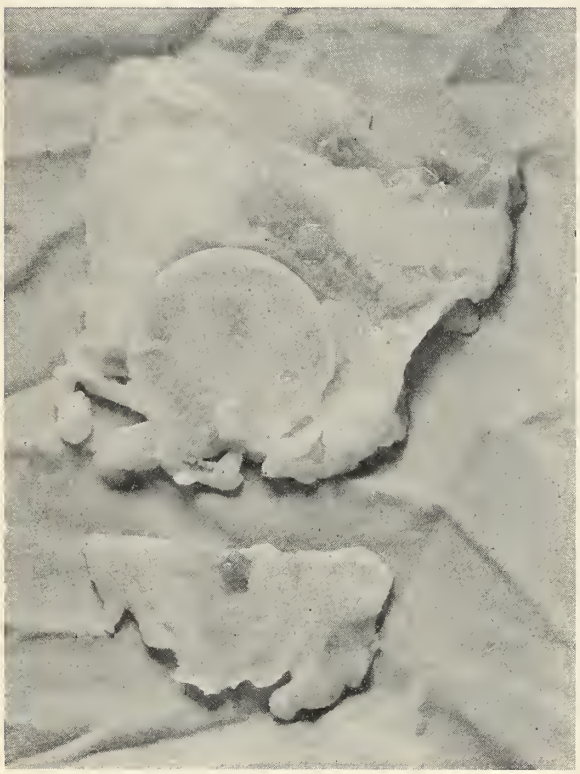


Fig. 1. Chondrosarcoma, ilium

Dr. Ponseti: So the diagnosis was chondrosarcoma of the left ilium, partially destroying the left hip joint. I may mention here that the X-rays did not reveal a very extensive destruction of the left ilium. Such is very often the case, and it poses a diagnostic problem. A patient may have radiating pain down to one leg, often resembling the pain pattern produced by a herniated intervertebral disc, and the X-ray films fail to reveal the iliac lesion. The chondrosarcoma spreads rather widely in between the trabeculae of the spongous bone of the ilium, but often does not destroy enough bone to produce a highly osteolytic area in the X-ray films, and consequently it may be missed. In this case, of course, the X-ray picture and the pain in the hip joint were clearly indicative of a destructive lesion, and the biopsy showed it to be a chondrosarcoma.

What can you do with a patient 67 years old who has a chondrosarcoma involving the ilium? In an attempt to cure him, the only thing you can do is a hind-quarter amputation. In other words, you can remove the entire left ilium and the entire left leg. This is a severely traumatic procedure, and in this instance the patient refused to have it done. So he was treated with X-ray therapy. X-ray, though it is not effective in treating the lesion *per se*, is a means of relieving pain. The patient went home, and after about two months he started to walk again.

Three months after leaving the hospital, he came back stating that the pain in his left leg had been a little better and that he had been able to walk with crutches, but that four days before admission he had developed abdominal pain, with radiation to his back and interscapular area. He had experienced nausea, but had not vomited. You will read in the protocol that the patient was in distress because of his abdominal complaint. He was able to eat nothing but broth. Two or three days after the onset of this abdominal pain, he developed another very interesting symptom: a numbness in his finger tips and toes which progressed upwards toward the trunk and then developed into a very severe weakness. Dr. Hickey saw him for the abdominal pain, and Dr. Sahs saw him for the numbness and weakness. I should like first to have Dr. Hickey comment on the course of the patient's illness while he was in the hospital.

Dr. Robert C. Hickey, Surgery: This man, after being admitted to the hospital, had numbness and accompanying weakness that began at the fingertips and at the tips of his toes and progressed centrally. He had two bowel movements during the course of this illness.

At the time I examined him, his abdomen was rotund and lax, with no signs of peritoneal irritation, but his large bowel did appear to be distended to both palpation and percussion. I suspected also, on one occasion, that there might be a small amount of free intra-peritoneal fluid. The peristalsis varied considerably; it was quiet at times, and it was audible and essentially normal at others. His blood pressure was stable at 130/80, a finding which compared well with the result of his examination three months prior. He vomited

an estimated 200 cc. of fluid, but then, during the course of his hospitalization, he did take some fluids orally and was, I believe, given some intravenously. I might mention one other thing: he had a type of scarlatiniform eruption that was apparently a drug rash. I couldn't identify the drug, and I believe the consultants in Dermatology were unable to do so, too. The edematous skin was considered a possible cause of the bizarre superficial neurological findings, but I think that this thought was discarded both by me and by all of the consultants who saw the patient later.

When I saw him, his history included a proved chondrosarcoma of 13 months' duration, and, in addition, there was a question of a carcinoma of the prostate which did not appear to have been completely excluded. At no time was one able to obtain a history of true intra-abdominal pain of any type. His presenting complaint, a full and crampy feeling in the abdomen, with radiating interscapular pain, would lead one to believe that something had gone wrong in the upper mid-abdomen, with referred pain going to the C4 nerve distribution. Now if this man had had an acute abdomen, one would have expected certain systemic signs. He might have had fever, but he did not have fever. One might have suspected him to have a leukocytosis, but he did not. There were no signs of collapse or shock. And in addition, the local signs of an abdominal catastrophe were absent; that is, there were no local signs of peritoneal irritation, point-tenderness, rebound, muscle guarding, etc. The abdomen was lax. We called upon the X-ray Department and found that there were two sets of radiographs. One directed attention to the abdomen, and another directed attention to the upper lumbar and the lower dorsal spine. I wonder if you would review the radiographs now.

Dr. Forbes: Films of the dorso-lumbar spine showed approximately 0.5 cm. anterior displacement of the body of L2 in relation to L1. An AP view of this same region showed narrowing of the body of L1 and an apparent thinning of the pedicles on the left side of the bodies of L1 and L2. A metastatic lesion involving the spinal cord at the lower dorsal upper lumbar level could produce such erosion.

Upright and horizontal films of the abdomen showed no free air beneath the diaphragm. There was considerable dilatation of the colon, and several segments of small intestine were distended to the upper limits of normal. Several segments showed an unusually wide soft tissue space separating their opposing surfaces. This phenomenon can be produced by either exudate on the serosal surfaces or by edema of the bowel wall.

Dr. Hickey: The patient's course was progressively downhill, and he expired on the eighteenth day following admission. During this period, his peripheral neuronitis appeared to be progressive, going from the periphery toward the center, and finally it was necessary that the man be placed in a respirator. I believe Dr. Sahs will comment on that phase of the case. With respect to the abdomen, it became necessary for us to arrive at some sort of decision as to what was going on. I postulated that the man had a retroperitoneal extension of neoplasm from one of two primaries —either from the prostate or from the chondrosarcoma of the ilium—and concluded that the change noted radiographically at the L1 level must represent a neoplastic involvement of that area. If I were right, there would be an involvement of the celiac axis in that area, which might explain the inactivity of the bowel on the basis of a motor dysfunction and also account for the transient interscapular pain. So my final diagnosis on this patient was peripheral neuronitis and chondrosarcoma with metastases, or possibly carcinoma of the prostate.

Dr. Flocks: I don't know what the answer is, but I wish to make it clear that purely on the basis of statistics, the lesion in the vertebral column and the lesion producing the abdominal distension cannot be due to metastases from carcinoma of the prostate. It must be a metastasis from this chondrosarcoma or from some other lesion altogether.

Dr. Ponseti: The patient was most certainly in great distress, as you have heard from Dr. Hickey. He became so weak that he was hardly able to breathe, and for that reason he was put in a respirator.

Dr. Adolph L. Sahs, Neurology: When I saw this man before he was put into the respirator, he presented a picture of symmetrical weakness of the arms and legs, absence of the deep tendon reflexes and plantar flexor responses, with sensory impairment involving all modalities and affecting the upper and lower extremities in a symmetrical fashion. Changes in sensation were present in the uppers, distal to the elbows, and in the lower extremities up to the groin. His capacity to cough was greatly weakened, and his abdomen was flaccid. His extremities were not particularly tender when they were squeezed. He had noticed no change in the color of his urine, and we noticed none. Cranial nerves were not affected at that time, at least. It was evident from the neurological examination that this man was suffering from a diffuse symmetrical polyneuritis which was involving his intercostal musculature, in addition to his extremities. One might consider several diseases in a situation such as this. The possibility that the patient was developing a compression myelopathy occupied our attention, for an acutely developing spinal-cord compression—particularly one that is located in the cervical region—can be confused with polyneuritis. The former condition may be responsible for the condition of "spinal shock" if it develops rapidly; and there might be attendant loss of reflexes, plus a rather peculiar type of sensory loss. If he had a compression

fracture of the lumbar vertebra, a lesion this low would not explain the numbness and weakness of his hands. As a second possibility, one that occasionally presents itself, we considered meningeal carcinotosis, which invades many nerve bundles and roots. There is no reason why metastatic sarcoma might not behave in similar fashion. Porphyruria with polyneuritis is also a possibility, though I have not seen porphyruria develop at this man's age. Usually there is extreme tenderness in the involved extremities, and there frequently are other manifestations such as convulsions and hypertension. I felt that the most likely condition was the one called neuronitis, infectious neuronitis or the Guillain-Barré syndrome. The patient's clinical course was quite suggestive of that disease, particularly since he continued with his neurologic difficulty, became progressively weaker and died in the respirator. He would not consent to a spinal fluid examination.

Dr. Ponseti: I don't suppose you want any more confusing a picture than this. This man had a node in the prostate which might have been a carcinoma; he had a proven chondrosarcoma of the ilium, and you may remember that a chondrosarcoma located in the ilium can spread along the walls of the veins. He did have edema of the lower extremities. This man had a peritoneal irritation which caused him a great deal of distress; he vomited and coughed a great deal. Because of his great weakness, he was unable to raise his sputum satisfactorily. Since about two days after the onset of his pain, he had had extensive numbness and weakness of the extremities.

According to the discussors, we have to contemplate several diagnoses. What was the cause of the patient's death? He may have died from the spread of the chondrosarcoma of the ilium. I shall add here that the lesion in the vertebrae which has been mentioned should not be considered of great importance; there was the narrowing of the disc space which is not infrequently seen in old people. He had extensive osteo-arthritis of the spine. A metastatic lesion will produce a destruction of the vertebra much before it destroys the disc.

Dr. Flocks: You raised the question of whether or not the lesion in the vertebra, that narrowing of the disc, might be unrelated to either the tumor of the prostate or the tumor of the ilium. Could he have had a tuberculous spine?

Dr. Ponseti: No. I think Dr. Forbes will agree that there was not the slightest question of vertebral tuberculosis. There was no true atrophy.

Dr. Sidney E. Ziffren, Surgery: Could I ask Dr. Hickey whether he paid any attention or attributed any significance to the thickening of the wall of the small bowel that was evident in the roentgenogram presented by Dr. Forbes?

Dr. Hickey: Yes, I thought about it. I thought about it quite a lot, but it seemed to me that the patient might have had ascites due to extension of the tumor. I could not explain all of his findings. I thought that if he had an acute intra-abdominal infectious condition such as would produce edema of the bowel wall, he should have had some systemic response that he did not have. He exhibited no fever, no leukocytosis and no signs of peritoneal irritation at any time.

Dr. Ziffren: Could it have been an antibiotic that produced the rash that you spoke about?

Dr. Hickey: I don't think so. He was not on antibiotics until he began to have respiratory difficulties. At about the time that he was placed on antibiotics, he began to have fever.

Dr. Sahs: I should like to come to the defense of Dr. Hickey by reporting to you that this was not a fly-by-night consultation so far as he was concerned. I am sure that he gave the situation much thought, and I am certain that he examined the patient's abdomen many times.

Dr. Charles D. May, Pediatrics: Were there any cutaneous lesions?

Dr. Ponseti: No. There was just the rash, and it disappeared promptly. Dr. Carter, would you present the pathologic findings?

Dr. Carter: This patient did have a chondrosarcoma. It involved the left acetabulum and the major portion of the body of the left ilium; it had perforated the ilium and had protruded into the pelvic cavity as a mass approximately 3 cm. in diameter. This mass was not impinging upon any vital structures, and there was no occlusion of the vessels in the area. The head of the femur was not involved by the tumor. There were small metastatic deposits on the left leaf of the diaphragm, and on the pleural surface of the left lung base. Approximately 1000 cc. of fetid, brown colored semi-purulent material was found in the abdominal cavity, and there was an obvious generalized peritonitis, the cause of which was a perforated ulcer on the anterior aspect of the first part of the duodenum. We autopsy at least three cases of peritonitis every year in which there have been no clinical manifestations, and no leukocytosis, rigidity or other abdominal findings that would lead one to suspect an acute abdomen.

The ulcer was a rather acute one. It did not exhibit the scarring that is so characteristic of ulcers of many years' duration. The lower third of the esophagus also was the site of two perforations, but these were undoubtedly agonal, for there was no evidence of a mediastinitus or other inflammatory reaction. Agonal ulcerations of the gastrointestinal tract are not particularly uncommon. The lungs showed a rather extensive necrotizing broncho-pneumonia, and vegetable debris were found in the lung tissue. There was a small, well differentiated adenocarcinoma of the prostate gland, measuring approximately 1 cm. in diameter.

No evidence of metastases from this tumor could be found in any of the viscera or in any of the regional lymph nodes. We have many sections of ganglia, peripheral nerves, the upper portion of the spinal cord and the brain. Re-cut sections were made of this material, and myelin sheath stains were done, but no anatomic lesions could be discerned. Because no references to them had been included in the protocol, the thoracic and lumbar portions of the cord were not removed.

As for the pathologic changes in the Guillain-Barré syndrome, I have been unable to find any reference to cases where there was not at least some type of anatomic change. The central nervous system *per se* may not show very much, but the peripheral nerves almost invariably do, particularly in cases such as this one, in which the patient has signs and symptoms for a considerable length of time. E. coli was cultured from the peritoneal surfaces, from a lung abscess and from heart blood. A positive blood culture is frequently an agonal affair, and at times can seem to indicate a rather fulminating septicemic process.

We have a gross photograph of the tumor, showing the head of the fumur. The articular surface is intact. There is no evidence of a neoplasm involving the head. The greater portion of the body of the ilium is replaced by neoplastic tissue. In another photograph, one of the areas of the tumor shows a fair degree of maturation and differentiation, but as we progress outward, we see that the cells are progressively more immature and myxomatous. The mass protruding into the pelvic cavity resembles fibrosarcoma more than it does chondrosarcoma. This is not an unusual finding. The different degrees of differentiation of mesenchymal tumors are a commonly recognized phenomenon. There is a metastasis to the diaphragm, again showing the anaplastic nature of the neoplasm. There was no cartilage in any of the metastatic deposits.

A section taken from an area near the perforation site shows that the inflammatory reaction was a very acute, fulminating one. The inflammatory reaction, involving the serosal surfaces of both the large and small bowels, accounts for the X-ray findings. In addition, the wall of the bowel in virtually all segments was edematous.

In a section of lung, not from the abscess site but from an area of bronchopneumonia showing vegetable debris, we noted a foreign-body type of reaction and an acute inflammatory response around it. There was very little host response to the inflammation.

In a section from the rather well differentiated adenocarcinoma of the prostate gland, the tumor was forming acini and was splitting and invading the muscle bundles of the prostate gland. It was fairly well localized, and no metastases were demonstrated in any viscera or in the lymph nodes.

SUMMARY OF NECROPSY FINDINGS

A chondrosarcoma involving the left acetabulum and the body of the ilium was found. The translucent neoplastic tissue had invaded through the medial aspect of the ilium and presented in the pelvis as a small, irregular, rounded prominence within adipose tissue. The femoral head was not involved. Small metastatic deposits were present on the pleural surface at the base of the left lung and on the left leaf of the diaphragm. The metastatic lesions were decidely more anaplastic than those of the primary site.

The peritoneal cavity contained an estimated 1,000 ml. of brown, fetid fluid, and generalized peritonitis was apparent. Fibrinous adhesions involving numerous loops of bowel were encountered. There was a perforated ulcer 8 mm. in diameter on the anterior aspect of the first part of the duodenum. The stomach contained 500 ml. of coffee-ground material. The lower third of the esophagus was the site of agonal autolysis and cellulitis, with two foci of perforation. No mediastinitis was present, but small areas of hemorrhage at the site of the perforations were noted.

The lungs, especially the lower lobes, revealed small scattered areas of pneumonic consolidation, and the bronchioles contained purulent material. An abscess 4 cm. in diameter was present in the dorsal segment of the right lower lobe. Microscopically, vegetable debris could be identified in the areas of consolidation.

A rather well differentiated adenocarcinoma of the prostate gland was observed, but no evidence of metastases was noted.

No anatomical lesions could be demonstrated in the brain, spinal cord or peripheral nerves. E. coli was cultured from heart blood, peritoneal fluid and the lung abscess.

NECROPSY DIAGNOSES

Chondrosarcoma, left acetabulum and ilium, with metastases to left pleura and left leaf of diaphragm

Duodenal ulcer with perforation

Generalized peritonitis

Acute necrotizing aspiration lobular pneumonia, lower lobes, with abscess, right lower lobe

Adenocarcinoma of prostate gland

Esophagitis with perforation, agonal

Generalized arteriosclerosis

Student: Is there any description of the inferior vena cava or tributaries?

Dr. Carter: That is a good point. Yes, there is. This patient's lower extremities were edematous at the time of autopsy. The only explanation is that he could have had a moderate degree of congestive heart failure. The one thing found at autopsy that would point to this conclusion was the recognizable chronic passive congestion of the liver. It may be that the degree of failure was

rather mild and that the other clinical manifestations overshadowed it. There was no occlusion of the femoral vessels and no pressure from any tumor. There was no evidence of a thrombophlebitis. He also had myocardial fibrosis, which was rather extensive in the septum.

Staff member: Don't you think that the unilateral edema that he had would be contraindicative of congestive failure?

Dr. Carter: It was unilateral at first, that is true, and that original condition was obviously contraindicative of cardiac failure as a cause. But it was bilateral when we saw the patient. We have no satisfactory explanation for the unilateral edema. The accessible portions of the vessels were examined very carefully, but the segments throughout the complete length of the extremity could not be. There could have been an occlusion.

Dr. Hickey: What I have to say is not by way of rebuttal, Dr. Carter, but I think we might assume that four days prior to his second admission, the patient may have had an acute stage of his duodenal ulcer, with, perhaps, a small amount of seepage. He did not have a perforation, but had sufficient leakage to produce a mild, generalized peritonitis, such as appeared in the radiographic findings. I think it stands to reason that the man did not have a perforated, leaking duodenal ulcer throughout the 18 days of hospitalization, but rather that there was a terminal episode of acute perforation of perhaps three to four, or maybe even fewer, days' duration, and that it was masked by the other severe, concomitant illnesses.

Dr. Ponseti: I think that there is another problem on which we should like to have some further comments from Dr. Sahs. The patient was very weak. Was that weakness due to a neuronitis that wasn't detected at autopsy because not enough tissue was removed, or was the weakness due perhaps to some electrolyte imbalance?

Dr. Sahs: I was quite satisfied about the presence of a polyneuritis because the patient had a symmetrical type of weakness, absent deep tendon reflexes and flaccid abdominal musculature, and because he was having trouble with his intercostal musculature, with the consequence that he was unable to cough up his secretions. There was a disturbance of metabolism which might be considered in retrospect—one which I didn't mention in the differential diagnosis. A severe depression of potassium might produce the picture of diffuse paralysis, but I would not expect peripheral sensory alterations under such circumstances.

Dr. Ponseti: Are there any questions or comments?

Student: How do you explain low calcium and phosphorus?

Dr. Hickey: I don't know.

FEDERAL ACTION ON NARCOTIC ADDICTION

New legislation to help combat narcotics addiction and to aid in rehabilitation of addicts is expected to grow out of President Eisenhower's appointment of a cabinet committee to study the extent of the problem and state and local agency activity in this field. On November 27, the President named the following to investigate the situation: HEW Secretary Hobby, Attorney General Brownell, Treasury Secretary Humphrey, State Secretary Dulles, Defense Secretary Wilson and special counsel Bernard Shanley.

The President said an up-to-date survey is urgently needed, along with a determination of what state and local groups have accomplished and are equipped to do in law enforcement and rehabilitation of addicts. He asked for prompt receipt of a report, and added: "I know that devoted and strenuous attention is being given to the problem on a number of fronts, but we should omit no practical step to minimize and stamp out narcotic addiction."

Enforcement of the basic narcotic-control law (the Harrison Act) has been in the hands of the Treasury Department since its passage in 1915. A bill introduced in the last Congress (H.R.2449) by Rep. Bailey (D., W.Va.) provided for a pilot-type Federal Bureau of Clinics which would assist states in setting up treatment centers and rehabilitation programs for both narcotic addicts and alcoholics.

LECTURES ON STREPTOCOCCAL INFECTIONS

Six medical authorities are to lecture on the control of streptococcal infections February 24 over a closed-circuit TV broadcast sponsored by Wyeth Laboratories and the American Academy of General Practice. Though a list of the cities in which the program will be received and exhibited has not yet been published, the statement made by the AAGP that there are to be 57 of them, in 36 of the 48 states, makes it virtually certain that this will be the inaugural program of closed-circuit medical TV in Iowa. Broadcast time, in the Central zone, will be 5-6 p.m.

The speakers are to include Dr. John D. Keith, associate professor of pediatrics at the University of Toronto; Dr. Charles H. Rammelkamp, Jr., professor of medicine at Western Reserve University, Cleveland; Dr. Burtis B. Breese, assistant professor of pediatrics at the University of Rochester, Rochester, New York; Dr. Gene H. Stollerman, director of Irvington House, Irvington-on-Hudson, New York; Dr. Lowell A. Rantz, associate professor of medicine at Stanford University; and Dr. Keith Hammond, a general practitioner in Paoli, Indiana.

MAYO LECTURES AND DISCUSSIONS

The Mayo Clinic and Mayo Foundation announce a four-day program, April 19-22, 1955, inclusive, of lectures and discussions on problems of current interest in the general fields of medicine and surgery.

The number of physicians and surgeons who can be accommodated is necessarily limited. Those wishing to attend should write to Dr. N. W. Barker, Mayo Clinic, Rochester, Minnesota, before March 1. Applications will be honored in the order in which they are received. There is no registration fee.



HAPPY NEW YEAR!

It is again the privilege of the JOURNAL to extend to all our readers our hearty good wishes for a happy new year.

Many events have occurred to make the year 1954 somewhat different from previous ones. We refer especially to the current disagreement between the Iowa State Medical Society and the Iowa Hospital Association brought about by the interpretation of state law rendered by Governor Leo A. Hoegh during his term as attorney general. Although an impasse resulted, it is still our hope that this matter can be equitably settled, without the necessity of a court decision.

The efforts of the national administration continue directed toward the promulgation of health insurance bolstered, if not dominated, by governmental grants to insurance companies. In addition, there is some concern regarding the proposal that all physicians accept reserve commissions in the United States Public Health Service for the rather questionable reason that the development of an adequate civil defense program requires that they do so. It would appear that such commissions would afford the government an opportunity to control medical practice to a degree which it has long sought.

Our State University College of Medicine, under the guidance of Dean Norman B. Nelson, has been most cooperative in attempting to assist the physicians of Iowa with their medical problems. The College has maintained its position among the medical schools of the country, and we trust that the coming year will afford it the opportunity of enhancing its prestige.

We look forward to the coming state meeting, which will be held on April 24-27, in Des Moines. This year, the meeting is to be held in the new Veterans' Memorial Auditorium, which will afford physical facilities heretofore unavailable. We urge all of our readers to attend in order that they may become better acquainted with the work of the State Society, so that they may benefit from the many papers to be given by a splendid group of speakers, and so that the meeting can be made an outstanding success through a high percentage of attendance.

You have probably noted our efforts to make our JOURNAL more attractive. These have consisted of changing certain headings and of utilizing other tricks of the printing trade. We also are trying to make our issues increasingly informative. As you no doubt have also observed, we are regularly presenting articles in the fields of psychiatry and medical economics. We trust that you will find them helpful.

The various committees of your State Society have been exceedingly active during the past year and will continue to promote your best interests during the year ahead. Let every member make a special effort during 1955 so that medical care in Iowa may progress to a higher plane than it has ever before attained.

ROUTINE TETANUS PROPHYLAXIS IS INADEQUATE

Tetanus is still a problem. Some of the traditional views relative to its occurrence and to the measures for its prevention need re-examination.

There are no safe wounds of traumatic origin if there has been a break in the skin. In a current review of 51 cases treated at University Hospitals, Iowa City, during the past 11 years, it was found that tetanus had occurred in a striking variety of wounds. Eight were the result of accidents within the home, such as a minor burn from spattered grease, laceration of the scalp produced by a fall and a small wound of the finger, due to a slip of the paring knife as a woman peeled potatoes. Still other wounds not ordinarily considered as regards tetanus prophylaxis included insect bite, cut lip, superficial cat scratch and varicose ulcers.

In eight of the 51 patients in the SUI tetanus series, antitoxin had been administered between the time of injury and the onset of infection. Five patients had been given the conventional dosage of 1500 units on the day of injury. Indeed, in two patients the same dosage of tetanus antitoxin had been repeated after a week, but one of those developed tetanus a week after the second injection, and the other was found to have it seven weeks after the second dose. In two of the eight patients, repeat inoculations were given at about the time when prodromal symptoms of tetanus were appearing. In one instance, the infection developed six days after injury, despite the fact that 1500 units had been given on the day following the accident.

Members of the surgery staff at the University contend strongly that 1500 units of antitoxin should no longer be considered an adequate routine dose and that at least 3000 units should be regarded as minimal. The passive immunity conferred is very transient. In order to prevent late tetanus, repeat doses of antitoxin should be given at weekly intervals if there is residual infection. Manipulation of a previously infected wound should call for repetition of antitoxin immunization, or in the actively immunized patient a boost-

er injection of toxoid. Hypersensitivity to serum reduces further the effectiveness of passive protection. In several cases in the SUI series, tetanus did appear after reactivation of a previously "quiet" wound.

Active immunization with tetanus toxoid has been shown to be extremely effective. Long reported that there were only 12 cases in the United States Army during World War II. In only two of those had there been active immunization with toxoid and booster injections at the time of injury. The disease remains a threat to the majority of the civilian population because many have not had active immunization and because a considerable number of those who were adequately protected while in military service have since lost their active immunity.

Four of the University Hospitals series of 51 patients had had previous toxoid. In one patient, only one injection had been given. In two of them, a series of three injections had been given in infancy, and in each instance tetanus developed following an injury six years later. No booster injections had been used. The fourth patient reported that he had had toxoid injections nine months prior to injury and did not consult his physician for a booster injection until prodromal symptoms of clinical tetanus appeared. Thus, deficiency of active immunization in these individuals was the result either of incomplete initial immunization or of failure to keep the immunization titre effective.

The incubation period in the SUI series varied from two days to many weeks. If protection is to be effective, it must be instituted at once. Even the delay of a day or two may lead to tetanus and fatality.

The simultaneous institution of active immunization and passive protection is sound, especially in those injuries from which recovery is likely to be slow. In addition, the patient is more likely to follow through with the active immunization program if he begins it at the time he is receiving active attention for his wound. The toxoid should not be mixed in the same syringe with the antitoxin, and it should be injected in a different body area. Toxoid injections should be repeated at intervals of three to four weeks until the third dose has been given.

It would appear at this time that it is unwise to count on more than five years' duration of active immunity following toxoid immunization. Following the expiration of that length of time, a booster shot cannot reactivate the immunity in less than two or three weeks. In the event of severe, massive wounds associated with heavy contamination, it is safer to employ both tetanus antitoxin and a booster injection of toxoid than it is to depend upon either one of them alone, except in those patients who one knows have had a recent active immunization. Small children should have a routine booster injection annually, preferably in the spring. Adults should have a renewal or booster toxoid injection at least every three years, or annually if they are engaged in hazardous occupations.

The mortality from established tetanus remains high. In the SUI series, 13 of the 51 patients died in the hospital. There is often a long period of disability following non-fatal tetanus. Only through constant urging by the medical profession, will the civilian population undergo active immunization. The physician must pay constant attention to tetanus immunity when he is faced with any kind of traumatic wound associated with a break in the skin. Only with these measures will the incidence of tetanus and its distressing morbidity and mortality be reduced.

SHOW BUSINESS BLAMED FOR SEX HYSTERIA

The current wave of sex hysteria is bearing fruit in an increased number of illegitimate births and a distressing problem of "bosom consciousness" among 'teen-agers, Dr. Goodrich C. Schauffler, of Portland, Oregon, told an audience at the Sixth American Congress on Obstetrics and Gynecology, in Chicago on December 14. He declared that press and entertainment media are responsible, among other things, for the fact that unmarried motherhood in that age bracket has doubled during the past 15 years.

"There is a greatly increased awareness of sex in the younger group," he contended, "which has been stimulated and maintained by modern journalism and so-called entertainment trends." In addition, a lack of parental supervision, the availability of liquor, narcotics, automobiles and auto courts, and the prevalence of gang influences are factors in many instances.

He feels that the most dangerous and regrettable trend is the "insane emphasis upon that semirespectable sex appendage, the breast," for that emphasis is not only largely responsible for precocious sexual activity, but is also the cause of serious emotional difficulties in girls who have not been generously endowed. Girls scarcely into adolescence, he said, already are subject to a bosom inferiority complex and are wearing miniature "falsies." In his own practice, he went on to report, he has had one attempted suicide and several serious and total derangements contingent upon real or fancied breast irregularities.

For young women in whom development of the breasts is either inadequate or excessive, there is little that physiologic medicine can do, he thinks. If there is an underlying pathology, quite a different problem is introduced. But all of the vaunted treatments, including sex hormones, he says, are unhelpful. Rather, an answer must be found in psychotherapy on an individual basis, or,

far better, in the prophylaxis that a shift in publicity technics would furnish.

MEDICAL AID PROGRAM FOR THE ORIENT

CARE, Inc., the organization which pioneered in sending food packages to Europeans after World War II, has the endorsement of the AMA and of the AMA Woman's Auxiliary for a program designed to provide $1,750,000 worth of equipment, materials and supplies to some 300 needy medical institutions in Southeast Asia. The project, based on a survey made by the World Health Organization of the United Nations, will benefit 83 hospitals in India and 189 in neighboring countries. The institutions range in size from a dozen to nearly a thousand beds each.

Requests from the individual institutions have been analyzed by CARE, Inc. and have been categorized as follows: hospital and laboratory equipment and supplies, drugs, textiles and maintenance items. All are in urgent need of such articles as bed linen, surgical instruments, textbooks on materia medica, pathology, and surgical and medical technics, and simple laboratory equipment.

Only part of the $1,750,000 needs be raised in cash. Equipment manufacturers are donating apparatus which, though brand new, is in long supply or has become obsolete as the result of new developments, and hospitals, among which is one at Ottumwa, are contributing used but still serviceable articles.

Individual physicians, county societies and auxiliary chapters have a fine opportunity, through assisting CARE, Inc.,* to win friends for democracy in a corner of the world where communism is a particularly severe threat and, at the same time, to raise standards of medical care in regions where they are most in need of improvement.

When they endorsed the program, the national officers of the Woman's Auxiliary expressed a preference for arrangements under which particular chapters could serve specific communities and institutions abroad. CARE, Inc., will be glad to assist in arranging such relationships. It was for just that sort of giving that the organization was originally established.

But gifts of non-earmarked money are necessary to the program, too. Donations of equipment are not usually accompanied by checks to defray the expense of packaging and transportation, and the program will bog down unless those costs are met.

The JOURNAL urges members of the Society, as individuals and as county groups, to assist this project as one of their public service activities.

* Address: Mr. M. C. Harris, Director, Division of Scientific and Special Material, CARE, Inc., 660 Fifth Avenue, New York City 16.

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1955, in Des Moines.

WORK-SIMPLIFICATION FOR THE HOMEMAKER

Ames is to be the site of a workshop on work-simplification procedures for the homemaker, the dates being June 14, 15 and 16, 1955. The workshop is sponsored by the Department of Home Management and the Department of Home Equipment of the Division of Home Economics at Iowa State College; the heart committees of the tuberculosis associations of Iowa; and the Iowa Heart Association.

The objective of the program is to train individuals who have sufficient professional background to permit their serving as community homemaker consultants. Every physician has at least one patient who he feels can carry on with her housework "if only she takes it easy." When it comes to making specific recommendations for taking it easy, however, the doctor is handicapped by not knowing everything that is involved in his patient's work. The workshop will undertake to orient the enrollees as to the need for time-and-energy conservation on the part of the physically or emotionally handicapped homemaker, as to the content of a work-simplification program, as to methods of teaching it, and as to the resources on which they can call for help, both in their own communities and elsewhere.

It must be emphasized that the cardiac patients themselves are *not* to be sent to the workshop. Applicants must be those who intend to teach the technics to patients, and they must have sufficient background in either home economics or nursing to permit their doing that instructional job satisfactorily. The sponsoring agency in the county is to be responsible for its representative's expenses.

The planning committee is composed of representatives of Iowa State College, the State University of Iowa, the Public Health Nursing Service of the Iowa State Department of Health, the Iowa Farm Bureau Federation and the Iowa State Medical Society.

This 2½-day workshop for people who will train homemakers in energy-saving procedures is comparable to the program being developed by the Iowa Heart Association for helping the cardiac farmer. It should provide valuable assistance to the busy physician who cannot personally pass upon the day-by-day routines in which his women cardiac patients engage.

LETTER TO THE EDITOR

Sir:

Iowa needs a psychiatric hospital for children. A recently completed survey,[1] to which many Iowa physicians lent their help, added further documentation to the already obvious fact that there are many seriously disturbed children in our state who will soon be in our prisons and state hospitals if nothing is done to help them. The headlines acquaint us with the steadily rising rate of juvenile delinquency. Every week we see children with neuroses, psychosomatic illnesses or behavior disturbances who cannot be given proper treatment because there is no hospital facility for them. Without such a facility, we cannot train the personnel necessary to provide treatment.

Over the past two years, the Children's Committee of the Iowa Mental Health Forum has completed an investigation of the existing facilities and programs in other states, as well as in Iowa; it has made an estimate of the need in this state and has formulated concrete recommendations regarding legislation. A Citizens' Committee has been organized to work toward the prompt adoption of an enabling act.

The Children's Committee has recommended that a Children's Center for the diagnosis and treatment of severely disturbed children be established in Iowa City in conjunction with the University. A 40-bed unit is contemplated, with the expectation that it would offer long-term therapy for about 24 children and short-term diagnostic work for about 16 youngsters at a time. Only in a university setting is it possible to attract specialists of the highest competence. Furthermore, at the university there are students in psychiatry, psychology, social work, pediatrics, nursing, remedial education, speech pathology and other disciplines who could get training for work with disturbed children and their families in such an institution. And a university provides the setting in which an inter-disciplinary approach to complex problems can result in a proper balance of service, training and research.

The estimated initial cost is $700,000, and the yearly operating budget is tentatively set at $400,000. For some of the sickest children, this expenditure may result in our paying $10,000 or $15,000 for the diagnosis and treatment of a single case. But these children, aside from being entitled as fellow citizens to the best care that can be given them, might otherwise cost the state as much or more in the crimes they would commit, in court costs, in long prison terms, or in custodial care for decades in the mental health institutes. Present evidence suggests[2] that with proper treatment, three-fourths of these disturbed children could be spared this tragic and wasteful outcome. Many more children can be screened while in brief residence, so that treatment may be given elsewhere with greater precision than now is possible.

All of the superintendents of institutions caring for or training children deplore the deficiencies of care for disturbed youngsters in Iowa. We physicians do not tolerate the admission of patients with contagious tuberculosis to a pediatric ward. We make diagnoses and place patients with physical diseases where rational treatment can be given. We isolate to prevent spread of the disease. Yet confused youths are lodged in jails, or emotionally disturbed children are lodged with psychotic adults, where improper advances may occur.

Kansas, Nebraska, Illinois, Minnesota, Michigan and other nearby states are far ahead of Iowa. They already have completed hospitals for disturbed children. The physicians of Iowa can be very helpful if they will speak to their legislators about the need for a residential treatment center for these patients, so that careful consideration may be given it during the 1955 legislative session.

Very sincerely yours,

H. H. COMLY, M.D.
Psychopathic Hospital, SUI

1. Reports of Subcommittees of Children's Committee, Iowa Mental Health Forum. Des Moines, Iowa Mental Health Authority, 1954.
2. Johnson, L. D., and Reed, J. H.: Evaluation of ten years' work with emotionally disturbed children. Ryther Child Center, Seattle, Washington, Monograph IV, 1947.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

HISTORICAL COMMITTEE

The Historical Committee of the State Society met in the central office Wednesday morning, December 1, 1954, with the following persons present: Dr. C. A. Boice, Dr. Jeanette Dean-Throckmorton, Dr. E. M. George, Mr. E. W. Hamilton and Miss Mary McCord. Dr. C. A. Henry, Dr. C. L. Jones, Dr. J. H. Chittum and Dr. Kenneth Murchison were absent.

Dr. George explained the JOURNAL's problems in regard to historical articles; some articles were reviewed; and suggestions were made for possible future contributions. It was decided that the Committee should try to obtain histories from county medical societies that have as yet no published records. The meeting adjourned at about 1:30 p.m.

SUBCOMMITTEE ON CHRONIC ILLNESS AND THE STATE COMMISSION ON CHRONIC ILLNESS

The following persons representing one or the other of the two groups met at the State Society office on Tuesday afternoon, December 7, 1954: Drs. Abraham Gelperin and Walter L. Bierring; Mrs. C. W. Maplethorpe, of the Iowa Federation of Women's Clubs; Miss Sullivan, for Mrs. C. C. Inman of the Farm Bureau; and Miss Bunch, of

the Iowa State Nurses Association. Miss Mary McCord acted as secretary.

The group studied the Minnesota bill creating a commission to study the problems of the aging population and drew up a proposed bill for a similar commission in Iowa to study chronic illness. A plan of activity was mapped out, and the meeting adjourned at about 3:00 p.m.

Subcommittee on Rural Health

The Subcommittee on Rural Health met with Dean Norman B. Nelson, of the S.U.I. College of Medicine, in Iowa City on Wednesday, December 8, 1954. The following persons were present: Drs. R. S. Jaggard, of Oelwein, S. P. Leinbach, of Belmond, R. E. Griffith, of Sheldon, J. W. Gauger, of Early, B. F. Howar, of Webster City, D. G. Sattler, of Kalona, and C. N. Hyatt, of Corydon, together with Miss Mary McCord, of Des Moines, the Subcommittee's secretary.

The group discussed with Dean Nelson the need for interesting more medical students in rural practice; the rules and regulations for the preceptor program; and the various methods of postgraduate education. It asked the cooperation of the College of Medicine in sending faculty members to rural areas that request their assistance. Many areas of possible cooperation were mentioned, and both groups pledged their support.

SPECIAL SESSION OF THE HOUSE OF DELEGATES

Iowa State Medical Society

Des Moines—December 12, 1954
Hotel Fort Des Moines

The special session of the House of Delegates was called to order at 10:00 a.m. by Dr. Herman J. Smith, Speaker of the House. Roll call was taken by registration cards. The following 112 delegates and alternates, representing 73 counties, were seated at this session.

DELEGATES SEATED IN HOUSE OF DELEGATES

County	*Delegate*	*Alternate*
Adams	A. W. Brunk	
Appanoose		E. A. Larsen
Audubon	H. K. Merselis	
Benton	J. E. Blumgren	
Black Hawk	C. D. Ellyson	M. A. R. Kuhn
	T. L. Trunnell	V. I. Sciscent
Boone	W. H. Longworth	
Buchanan		P. J. Leehey
Buena Vista	H. E. Farnsworth	
Calhoun	Paul Ferguson	
Carroll	J. M. Tierney	
Cerro Gordo	J. E. Houlahan	
	H. G. Marinos	
Cherokee	D. C. Koser	
Clarke	H. E. Stroy	
Clay		D. H. King
Clinton	R. T. Lenaghan	R. J. Nelson
Crawford	J. M. Hennessey	
Dallas-Guthrie	W. A. Castles	
Davis	Paul T. Meyers	
Decatur	K. R. Brown	
Delaware	J. E. Tyrell	
Des Moines	F. G. Ober	
	J. F. Sulzbach	
Dickinson		T. L. Ward
Dubuque	D. C. Conzett	
	R. J. McNamara	
Emmet	J. L. Powers	
Fayette		J. P. Gallagher
Floyd		E. V. Ayers
Franklin	R. E. Munns	
Greene	L. D. Nelson	
Grundy		E. A. Reedholm
Hamilton	F. F. Hall	
Hancock-Winnebago	C. V. Hamilton	
Hardin	L. F. Parker	
Harrison	A. C. Bergstrom	
Henry	J. S. Jackson	
Humboldt	T. G. Herrick	
Iowa	C. F. Watts	
Jasper	J. W. Billingsley	
Johnson	E. J. Boyd	J. S. Greenleaf
	W. H. Flocks	S. C. Ware
	L. H. Jacques	
	E. W. Paulus	
	E. F. Van Epps	
Jones	T. M. Redmond	
Keokuk	D. L. Grothaus	
Lee	L. E. Pumphrey	
Linn	L. J. Halpin	E. H. Files
	J. J. Keith	
	John Parke	
	C. H. Stark	
Lucas	A. L. Yocom	
Madison	P. F. Chesnut	
Mahaska	K. M. Lemon	
Marshall	L. O. Goodman	
	D. D. Harris	
Mitchell		T. E. Blong
Montgomery	E. L. Croxdale	
O'Brien		Hugh LaMaster
Page	P. L. Spencer	
Plymouth	W. L. Downing	
Polk	W. D. Abbott	F. M. Burgeson
	T. A. Bond	H. G. Ellis
	F. C. Coleman	H. K. Shiffler
	H. G. Decker	W. M. Sproul
	R. A. Dorner	
	O. A. Elliott	
	G. E. Mountain	
	Fred Sternagel	
	D. C. Wirtz	
Pottawattamie	C. V. Edwards	
	I. Sternhill	
	N. D. West	
Poweshiek	J. R. Parish	
Ringgold	E. J. Watson	
Sac	W. I. Evans	
Scott	George Braunlich	P. E. Gibson
	L. V. Schroeder	
	J. H. Sunderbruch	
Shelby	J. H. Spearing	
Story	J. D. Conner	
	G. E. McFarland, Jr.	
Tama	C. W. Maplethorpe, Sr.	
Union	H. J. Peggs	
Van Buren	L. A. Coffin	
Wapello	C. A. Henry	
	W. C. Wolfe	
Warren	L. E. Hooper	
Washington	D. G. Sattler	
Wayne	C. N. Hyatt	
Webster	H. H. Allen	
	C. J. Baker	

County	*Delegate*	*Alternate*
Winneshiek	E. F. Hagen	
Woodbury	W. K. Hicks	C. T. Maxwell
	E. M. Honke	
	F. D. McCarthy	
	R. C. Mugan	
Wright	G. E. Schnug	

Dr. Smith called for reports of officers. Dr. G. V. Caughlan, Council Bluffs, President, was the first to report. He told the delegates that he had requested this special meeting of the House to establish the position of the Iowa State Medical Society relative to hospital-physician relations. In his opening remarks he said he was very hopeful that whatever position the House of Delegates established as regards hospital-physician relations would be one which would satisfy the members of the Society. He said it was his opinion that the House of Delegates would probably reaffirm earlier actions of the Executive Council and House of Delegates on this problem.The President told the delegates that in his opinion there had been a gradual invasion into the practice of medicine by hospitals, and that pathologists and radiologists might be classified as captives of the hospitals. He expressed the opinion that because of this situation it would be no more than a short step for the hospitals to extend their offerings to include other medical services, such as surgery and obstetrics. He said that organized medicine must stop further encroachment upon the practice of medicine, and that the time to do it is now. In his opinion, a few ambitious hospital administrators are the ones who want to take advantage of the opportunity to control the practice of medicine.

The Speaker then requested the President-elect, Dr. L. A. Coffin, of Farmington, to address the House. Dr. Coffin said he considers the hospital-physician controversy the most serious problem that has ever come before the Medical Society. He reminded the delegates that the Board of Trustees, on August 15, and the Executive Council, on October 14, has approved the Attorney General's compromise agreement, and that the three plans which were submitted to the Attorney General by the State Society's Committee on Medical Practice in Hospitals and the Attorney General's supplemental opinion of November 8 were also approved by the Board of Trustees. The President-elect told the delegates that, following the conference which he attended in Chicago between members of the Boards of Trustees of the American Medical Association and American Hospital Association, he had come to the conclusion that the Society will not be able to reach agreement with the hospitals short of the legislature or the courts. Continuing, he said that this had been proved by the meetings which have been held between representatives of the Iowa State Medical Society and Iowa Hospital Association since that time and, further, that in his opinion the trouble is not entirely with the IHA, but is with the AHA as well. He believes the AHA is manufacturing the bullets, and the IHA is shooting them. He felt, he said, that the delegates should decide on a course of action and follow it wholeheartedly. Since the Attorney General has ruled that a hospital cannot practice medicine and since the Board of Medical Examiners is bound by that ruling, he is of the opinion that steps should be taken to publicize the Medical Society's position in this controversy. Before closing his remarks, Dr. Coffin called upon the doctors to stand united, once the Medical Society's policy is established.

BOARD OF TRUSTEES REPORT

Following Dr. Coffin's remarks, the Speaker invited Dr. W. L. Downing, of LeMars, chairman of the Board of Trustees, to speak. Dr. Downing gave a brief report on several of the administrative activities of the Iowa State Medical Society. He reminded the delegates that in 1949 the House of Delegates voted to raise annual Society dues to $50 to permit the employment of a general manager and to make possible the financing of enlarged activities brought about by many pressing medical problems. He said one of the largest undertakings since that time has been the purchase of a lot and the construction of an office building to house the Society. He told the delegates that constructing and equipping the building cost approximately $40,000, but that those costs have been met and the Society's bond fund, which was somewhat depleted at that time, has since been built up to approximately $60,000. The pension fund in effect for three employees, plus salaries, uses up almost one-half of the annual budget of approximately $103,000 that is derived, principally, from dues paid by approximately 2,100 members. Early in 1954, he said, it was hoped that dues might be reduced slightly in 1956, but then came the hospital-physician controversy. Expenditures as a result of the unexpected emergency, he reported, have amounted to approximately $7,000, which includes the cost of special legal services, extra meetings, telephone calls, extra newsletters, and the like. He told the delegates that 1,800 hours of overtime have put in by the staff of the Society, without additional recompense. He said that as a result of this emergency, the Society probably would finish the year 1954 with its cash reserve exhausted.

Dr. Downing referred to two other problems facing the Board of Trustees. First, the Iowa State Medical Society Educational Fund is to be supported almost entirely from the dues of members, beginning in January, 1955. This change has necessitated an additional $10 annual outlay for each dues-paying member, making the dues $60. He urged the delegates at the meeting to assist fellow physicians in their respective areas in understanding the necessity for the increase in their dues and to encourage their acceptance of it.

Regarding the second problem, he said that in October the Executive Council and Committee on Public Relations voted to ask that the Board of Trustees employ a public relations director and other personnel to set up a more active public relations program. Dr. Downing said it has been proposed that Blue Shield be asked to utilize this public relations service of the State Society and to share equally in its cost. "Our problem is how to finance this proposed addition to our staff and our budget," he said. In closing, Dr. Downing informed the House of Delegates that, if they wished, they could authorize that the bond fund be used to meet this emergency or that additional dues be levied. He solicited the cooperation of the delegates in answering these questions.

The Speaker called next for the report of the Secretary, Dr. R. F. Birge, of Des Moines. His report follows.

REPORT OF THE SECRETARY

Mr. Speaker, Mr. President, officers of the Society, members of the House of Delegates and guests: My report is limited to official actions of the House of

Delegates, Executive Council, and Board of Trustees, relative to the transfer of medical service benefits from Blue Cross to Blue Shield and the elimination of the practice of medicine by hospitals.

The first resolution was introduced by Dr. E. M. Kersten, Fort Dodge, and was approved by the House of Delegates in April, 1952. I will quote from it:

"Be It Resolved that the House of Delegates of the Iowa State Medical Society requests the Board of Directors of Iowa Medical Service (Blue Shield) to investigate the possibility of extending Blue Shield benefits to include all medical services including those rendered by radiologists, pathologists and anesthesiologists, thus relieving Blue Cross of responsibility for covering such services, and

"Be It Further Resolved that the House of Delegates of the Iowa State Medical Society express its appreciation to Blue Cross for covering these services during the early formative years of Blue Shield."

In September, 1952, the Executive Council considered the report of Dr. C. H. Stark, Cedar Rapids, on behalf of his Committee on Hospital and Professional Relations, and approved a resolution, which stated in part:

"Be It Resolved that the Iowa State Medical Society affirms its conviction that anesthesiology, pathology and radiology services may be legally rendered only by or under the direct supervision of licensed doctors of medicine, and

"Be It Therefore Resolved that the Iowa State Medical Society shall call to the attention of the Iowa Medical Service (Blue Shield), and Iowa Hospital Service Inc. of Iowa and Associated Hospitals Service Inc. of Sioux City (Blue Cross) that certain inconsistencies exist pertaining to insurance plans which provide for services in the fields of anesthesiology, pathology and radiology, to wit, that coverage is provided in hospital service contracts that logically belongs in medical service contracts, and

"Be It Further Resolved that Iowa Medical Service, Iowa Hospital Service, and Associated Hospitals Service and the Iowa Hospital Association shall be invited to confer with representatives of the Iowa State Medical Society and other interested parties in an effort to evolve revisions of their policies which will correct said inconsistencies."

On January 7, 1954, the Executive Council approved the following resolution which was based on a report of Dr. Stark's committee, and introduced by Dr. G. V. Caughlan, Council Bluffs:

"Whereas the American Medical Association at its 1950 meeting approved the Hess report which is a directive to prohibit the practice of medicine by hospitals in the fields of pathology, radiology, anesthesiology and physiatry, and

"Whereas the Committee on Hospital and Professional Relations in 1952 submitted to the Executive Council of the Iowa State Medical Society a resolution (as published in the November issue of the Journal of the Iowa State Medical Society, page 557) emphasizing the inconsistencies that exist in the contracts of Iowa Medical Service, Hospital Service Inc., and Associated Hospitals Service (Sioux City) as related to medical service, and

"Whereas recent developments in Blue Cross such as the Comprehensive 70 contract have made it more essential that hospitals and physicians should recognize the confines of their practice, and

"Whereas a recent contract developed for the packing industry has further aggravated the situation for such professions as x-ray, pathology, anesthesiology and physiatry, now therefore

"Be It Resolved that the Executive Council of the Iowa State Medical Society approve the Hess report and empower the president of this Society to appoint a committee of five members and that he request the president of the Iowa Hospital Association to appoint a similar committee, these committees to meet with the Blue Cross and Blue Shield representatives with the objective of eliminating the practice of medicine by hospitals and placing it in the hands of those legally qualified to practice medicine, and

"Be It Further Resolved where entire transfer of these medical services from Blue Cross to Blue Shield cannot be accomplished immediately, such services as anesthesiology, pathological tissue examinations and other medical services more easily transferable shall receive immediate action while plans are developed for the transfer of the remainder, and

"Be It Further Resolved that the sincerity of the parties involved be made evident by positive action and report to the House of Delegates of the Iowa State Medical Society in April, 1954, and

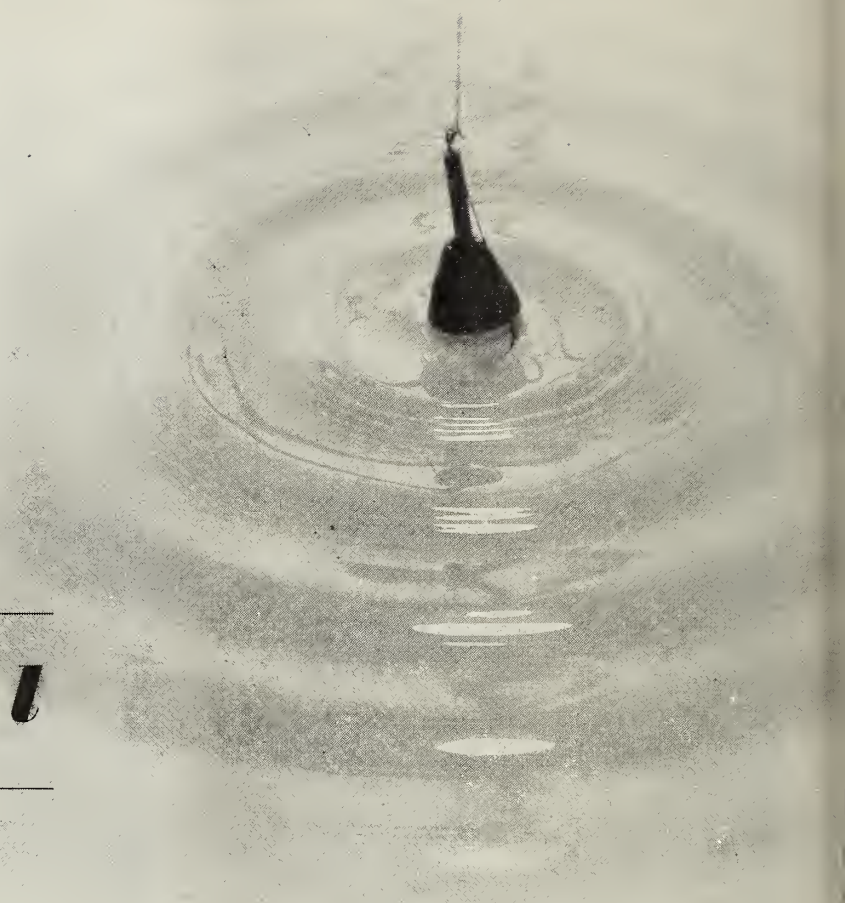
"Be It Further Resolved that amicable negotiations failing, the Executive Council of the Iowa State Medical Society will support legal action challenging the right of hospitals or corporations to practice medicine."

In April, 1954, Dr. B. T. Whitaker, Boone, presented the report of his special Blue Cross-Blue Shield study committee before the House of Delegates. His committee report was approved. The following quote is taken from this report:

"This committee was given two directives by the Executive Council: first, to negotiate the transfer of medical services from Blue Cross to Blue Shield; second, to stop the trend toward the 'practice of medicine' by certain hospitals.

"By passing of the resolution April 20 at a meeting of the Board of Directors of Blue Cross, the first directive has been fulfilled. While the arrangement set up is on a temporary basis, we feel a permanent solution can be found by continuing negotiations. We would like to express our appreciation to the administrative officers of both Blue Shield and Blue Cross. A wonderfully cooperative attitude was manifested in attempting to iron out a complicated problem.

"As to the second directive, we believe a forward step has been taken and, to implement this movement, your committee recommends the appointment of a special committee of the House of Delegates, to be appointed by the president, to consist of three members. We suggest, if possible, that they be chosen from central Iowa in order to facilitate frequent and possibly suddenly called meetings. This committee is to meet with a similar group from the Iowa Hospital Association with the idea of making a thorough, calm study of the entire problem from the standpoint of the public, the hospitals, and the profession."



minimal

side

effects

ACHR

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COM

One of the notable qualities of ACHROMYCIN, the Lederle brand of Tetracycline, is its advantage of minimal side effects. Furthermore, this true broad-spectrum antibiotic is well-tolerated by all age groups.

In each of its various dosage forms, ACHROMYCIN provides more rapid diffusion for prompt control of infection. In solution, it is more soluble and more stable than certain other antibiotics.

ACHROMYCIN has proved effective against a wide variety of infections caused by gram-positive and gram-negative bacteria, rickettsia, and certain virus-like and protozoan organisms.

ACHROMYCIN ranks with the truly great therapeutic agents.

OMYCIN*

HYDROCHLORIDE
Tetracycline HCl Lederle

irl River, New York

Lederle

*REG. U.S. PAT. OFF

On August 15, 1954, the Board of Trustees reviewed the past actions of official bodies of this Society and summarized them in the form of the following "Definition of Policy of the Iowa State Medical Society on Physician-Hospital Relationships":

"1. Radiology, pathology and anesthesiology are integral parts of the practice of medicine.

"2. The purpose of the Medical Practice Act is to maintain the highest quality of medical care for the people of Iowa.

"3. The Attorney General's recent interpretation of that portion of the Medical Practice Act on physician-hospital relationships is correct.

"4. Any changes in physician-hospital relationships by radiologists and pathologists which are necessary to comply with the law should be made without increase in cost or decrease in quality of service. Radiologists and pathologists have committed themselves to the Iowa State Medical Society that these principles will be maintained.

"5. Hospitals must receive just treatment and their interests protected.

"6. Changes in physician-hospital relationships should be made through proper negotiations between physicians and hospitals.

"7. After conclusion of negotiations at the state level, discussions should be carried out at the local level between individual physicians and individual hospitals. Any relationships so developed, however, must comply with the law.

"8. A satisfactory physician-hospital relationship must exist in order for the people of Iowa to receive the best possible medical and hospital care."

On October 14 the Executive Council approved a motion offered by Dr. E. F. Van Epps, College of Medicine, Iowa City. I will read the pertinent parts of this motion:

"I move the approval of the actions to date of the Board of Trustees and of the Committee on Medical Practice in Hospitals regarding physician-hospital relations, together with the following items:

"Definition of policy adopted by the Board of Trustees on August 15, 1954.

"The principle that medical services cannot be divided into professional and technical components, in accordance with recommendations of Iowa radiologists and pathologists.

"Our reply to certain 'facts' submitted by our legal counsel to the Attorney General on behalf of the Iowa State Medical Society on October 4, 1954.

". . . serious consideration be given to a planned public relations campaign to be carried out by that appropriate committee of the Iowa State Medical Society. It is further urged that the Trustees consider allocation of adequate funds to accomplish such purpose.

"That we reaffirm our original position that local doctors with local attorneys should meet with their local hospital authorities, completing their contracts in accordance with the laws of the State of Iowa, keeping in mind the welfare of the patient, the hospital, and the doctor."

A complete record of these actions to which I have referred is available for your study if you should desire to see it.

Respectfully submitted,
RICHARD F. BIRGE, M.D., *Secretary*

COMMITTEE ON MEDICAL PRACTICE IN HOSPITALS

The next order of business was the reports of committees. Dr. W. D. Abbott, Des Moines, chairman of the Committee on Medical Practice in Hospitals, was asked by the Speaker to present a report of his group's activity. Dr. Abbott referred to the reports of his committee which had been sent to the membership and to the packets of background information on the hospital-physician problem, and said he hoped all delegates had taken time to study them. Regarding the broad implications of the problem, he declared that the outcome of this controversy in Iowa will undoubtedly determine future patterns for medical practice throughout America. The question which has to be decided, he maintained, is whether or not to ignore this encroachment on the long-established principles which have enabled doctors of medicine to provide their patients with the best medical care in the world. The Medical Practice Act adopted by the General Assembly of the State of Iowa specifically forbids corporations, cooperatives and similar groups from practicing medicine by hiring and exploiting the services of licensed physicians, he said. In his opinion and in the opinion of his committee, some Iowa hospitals are illegally practicing medicine by employing physicians.

He said that recently, when the hospital-controlled Blue Cross persisted in issuing contracts which would pay for medical services only when they were rendered by a hospital employee and when it refused to transfer those services to Blue Shield, where they rightfully belong, it became necessary for the State Board of Medical Examiners to contemplate whether or not a licensed physician employed by a hospital to perform medical services was doing so according to medical ethics and law. The Board, therefore, appealed to the Attorney General for a ruling, which since has become known to everyone.

A few hospital administrators, who claim to represent the hospitals of Iowa, have decided, Dr. Abbott said, to ignore the law, to disregard the ruling of the Attorney General and, if necessary, to go to the courts or to the legislature in order to continue their present practice of hiring physicians. He said that these men have refused to acknowledge that they aim to control the practice of medicine. But the sincerity of their denial is doubtful, for when one analyzes the tactics and arguments that they have used during the negotiations for a settlement, it becomes apparent that their strategy has been identical with that used against the physicians of Colorado and elsewhere in this country. This uniformity strongly suggests the existence of a national conspiracy of certain hospital people eventually to get control of medicine. Thus, it appears that these few administrators in Iowa are unwilling to accept any type of settlement which may jeopardize future chances for hospitals to hire physicians not only in pathology and radiology, but in other branches of medicine. Dr. Abbott stated that in their contemplations and decisions, physicians must keep in mind what is best for their patients. He declared that the Code of Ethics is predicated on the ancient and tried

proposition that a licensed physician treating the sick is responsible only to God and can serve but one person, his patient. "These hallowed relationships must not be destroyed by our neglect, or by the misbehavior or malicious intentions of others," he said.

Dr. Abbott reported that as a recent conference, one hospital administrator had said that the IHA would not consent to having pathologists and radiologists bill for their services in their own names, because by agreeing, the IHA would place itself in the position of acknowledging radiology and pathology as professional services and as a part of the practice of medicine. That, it refused to do. Dr. Abbott quoted this same administrator as having defended that refusal on the grounds that, by identifying these physicians' work as medical services, the IHA would be forced to approve the transfer of the benefits for them from Blue Cross to Blue Shield, a shift of which they would not approve.

In closing his remarks, he assured the delegates of his virtual certainty that this controversy between the doctors and hospitals can be solved if local physicians and local hospital officials will meet together to work out contracts according to the recommendations of the Attorney General. He told the group that his committee, together with the Society's attorney, had been concentrating on the problem posed by the hospitals which do not have radiologists and pathologists in regular attendance. Progress can be reported on these negotiations with hospital trustees at the local level, he said.

Mr. I. W. Myers, legal counsel for the Society, who spoke next, reviewed the history of the hospital-physician controversy from a legal point of view and informed the delegates that with the assistance of Dr. Abbott and others he had succeeded in completing a contract with the Decatur County Hospital, in Leon, a contract which in his opinion meets the requirements of Iowa law and ethics and is one that might serve as a model or pattern for agreements with other county hospitals in the state.

LEGISLATIVE COMMITTEE REPORT

Next in the order of business was a report from the Legislative Committee, presented by Dr. John Conner, of Nevada, chairman of a subdivision of that committee. Dr. Conner reported that medical care in the United States has been traditionally directed and provided by doctors, and has been based on the principles of (1) free choice of physician by the patient (2) close patient-physician relationship and (3) fees for medical care based upon the patient's ability to pay. During the past 20 years there have been a number of groups who believed that they could do a better job than the doctors in directing the health care of the American people. All of these groups have had one thing in common: They would do away with these three traditional principles on which the provision of medical care has been based.

In his presentation, he referred to socialistically-minded politicians who, from 1940 to 1950, attempted to bring medicine under federal control through compulsory health insurance. Organized labor was moving into the health field at about that time. Labor had already started its drive for fringe benefits, and health centers operated by labor unions were taking care of thousands for workers in metropolitan areas. The health program of the United Mine Workers is financed by 40 cent royalty on every ton of coal from the mines. Dr. Conner reported that this group has constructed 13 hospitals in West Virginia which serve as the centers for medical care for miners and their families. He spoke of other groups that have invaded the medical field through prepayment, closed-panel health care plans—the Kaiser-Permanente plan, the Health Insurance Plan of Greater New York, and the Cooperative Health Insurance Plan.

Dr. Conner pointed out that the hospitals, or more particularly, their lay administrators, are another group that is attempting to invade the medical field. Leaders in the AMA have recognized this threat of invasion by hospitals for over 20 years, and a record of discussions on this subject as early as 1933 can be found in AMA proceedings. Dr. Conner said that, for a long time, only radiologists, pathologists and anesthesiologists were directly affected and, for the most part, other doctors took no particular interest in the hospital-physician problem. As a matter of fact, many thought the problem was the particular concern of radiologists, pathologists and anesthesiologists.

Nothing could be further from the truth, he asserted. Three things, he contended, have happened to make it a problem for all doctors. (1) The tremendous increase in the number of patients going to hospitals has resulted in the hospitals' assuming an increasingly prominent role in health care, an increasing prominence which, in turn, has tended to minimize the position of the doctor. This development has opened up the new occupation of hospital administrator. The modern hospital administrator is a man who is convinced that the hospital, as a health center, plays a supremely important role in community life, and who looks upon doctors as only one of the groups who are interested in health care. (2) The idea has rapidly gained acceptance that private medical care can be adequately rendered through out-patient departments and hospital-employed physicians. For some time there have been a few hospitals, Dr. Conner pointed out, where salaried members of the staff have provided medical care to private patients. He mentioned Billings Hospital in Chicago, Henry Ford Hospital in Detroit, and Barnes Hospital in St. Louis. He mentioned that in these hospitals, surgeons, obstetricians and pediatricians are on the hospital payroll, and he said that the number of such hospitals employing physicians has increased considerably in the last few years. (3) The government has entered into the field of hospital construction by providing federal funds. He spoke of the expansion of tax-supported facilities, diagnostic treatment centers, etc.

The Legislative Committee spokesman reiterated that it seems we are entering a new era of hospitalization, where the hospital is to enter the ambulatory patient business on a really large scale. He used as an illustration the remarks of the chairman of the Council on Prepayment Insurance Plans of the American Hospital Association, Dr. Madison Brown, who told the House of Delegates of the AHA this past September: "We wish to promote a plan including complete diagnostic services in the hospitals and also complete ambulatory outpatient services incorporated in the Blue Cross plan." Dr. Conner said that when these trends in hospital care are understood, one can realize why the IHA is so adamant in its opposition

to the transfer of medical service benefits from Blue Cross to Blue Shield.

In defense of those hospital administrators who still have the proper understanding of their position in providing health care facilities, Dr. Conner said that the vision of this new era in hospital care is evident only to a few hospital administrators in Iowa. In contrast, most of them, and most hospital trustees in the state, have always been interested only in providing hospital care of the traditional type. In his closing remarks, Dr. Conner stated that all these groups—government, labor, industrial tycoons, and hospitals—have the same objective: to remake the health care of the American people by selling the services of physicians to private patients through lay-controlled groups which have no regard for the patient's free choice of physician or for doctor-patient relationships.

BOARD OF MEDICAL EXAMINERS

Next Dr. G. H. Scanlon, Iowa City, chairman of the Board of Medical Examiners, discussed points covered in the Attorney General's two opinions. These opinions enunciated the following principles and facts.

1. Pathology and radiology are integral parts of the practice of medicine. Pathologists and radiologists (or other physicians who practice pathology or radiology part time) must assume responsibility for the work of x-ray and laboratory technicians in order to assure the accuracy of diagnosis.

2. It is against the public interest for a third party to intervene in the relationship of the licensed person with the individual who seeks his service; for example, the attorney and his client, or the doctor and his patient.

3. Therefore, in the interest of the public welfare, no corporation can hold forth the services of radiologists or pathologists to the public and charge patients for these services. A corporation which does so is guilty of practicing medicine without a license.

4. Likewise, a physician who hires out to a corporation on a salary or percentage arrangement and who permits that corporation to bill in its name for his services is guilty of unprofessional conduct.

5. Each hospital laboratory must be in charge of a doctor, preferably a clinical pathologist. Each hospital radiology department should, likewise, be in charge of a physician, preferably a radiologist.

6. However, the Attorney General has said that *any* duly licensed physician may be in charge of a radiology or pathology department in a hospital. This means that the medical staff and administration of each hospital are free to work out the question of who shall be in charge of their radiology and pathology departments without the necessity, if circumstances do not warrant it, of utilizing the services of distantly located radiologists and pathologists.

7. Although, in his original opinion, the Attorney General suggested that hospitals lease departments of radiology and pathology to physicians, in a supplemental opinion he stated that other arrangements, such as percentage plans, would be proper if the disbursements were so made that the allocation to the doctor represented reasonable compensation for his professional services and that the allocation to the hospital represented the proper return to it for the facilities that it provides, the space it furnishes, and the employees it pays.

Dr. Scanlon announced that he hoped some mechanism could be developed, whereby the contracts prepared by the Attorney General and others could be made available to doctors and hospitals throughout the state. He said that since it would be almost impossible to develop model contracts to satisfy the requirements of every situation, it would be necessary for negotiators in each county to change the models to meet local needs. He suggested that before these contracts are signed by hospitals and doctors, each party should consult its own attorney to make sure, both that its own interests are protected and that the contract complies with the requirements of the law. In summary, the chairman of the Board of Medical Examiners outlined the following points.

A. Pathology and radiology are the practice of medicine.

B. Therefore, a physician must be in charge of each Iowa radiology and pathology laboratory. The physician does not need to be a specialist in the field of pathology or radiology. In smaller communities, a local physician may assume the responsibility and arrange for consultation with qualified radiologists and pathologists, when necessary or when desired.

C. All radiology and laboratory services must be billed in the responsible doctor's name.

D. The bill may, however, be attached to the hospital statement, and its amount included in the hospital statement.

E. The income from the practice of radiology and pathology in instances where hospitals provide space, facilities, and salaries of technical help may be collected by the hospitals in the name of the physician and distributed equitably on a percentage or other basis.

F. This arrangement can be effected without harm either to the hospital or the physician, and without detriment to patients who may come into the hospital. It can be effected without disruption of existent relationships of physicians with hospitals.

In concluding his remarks, Dr. Scanlon stated that the Board of Medical Examiners is willing to allow adequate time for the development of satisfactory agreements. However, he emphasized that the Board is bound by the law to uphold the Medical Practice Act and that the Attorney General's interpretation of the Iowa code must, of necessity, constitute the Board's guide for procedure.

REPORT OF THE JUDICIAL COUNCIL

Dr. O. D. Wolfe, Marshalltown, chairman of the Council, was the next officer of the Society to report. He spoke of the judicial responsibility of the Council and said the Judicial Council has been vitally and intimately concerned with the hospital-physician controversy. He expressed appreciation for the efforts of Dr. Abbott's Committee on Medical Practice in Hospitals and commended Drs. Abbott, Shiffler and Nelson for a job well done and for their unselfish, conscientious and dignified performance on behalf of the State Society. Dr. Wolfe said that some members of the Society have gained the impression that the committee has worked only to serve the interests of a small group of specialists. He said that it is the sincere opinion of the Council members that this problem con-

cerns every practicing physician and the ultimate status of the private practice of medicine. He said that, undeniably, the goal of the hospital group in the present conflict is control. In conclusion, Dr. Wolfe commented that those individuals may ask for a new interpretation from the Attorney General, they may take the question to the courts, they may endeavor to persuade the legislature to change the present statute, or they may employe a delaying action. "Whatever their procedure," he said, "their efforts will be most effective if they can create disunity in our ranks." For that reason, Dr. Wolfe urged complete support of the Society's position, saying, "Let us unite ourselves behind the conviction of a single principle—the preservation of the private practice of medicine by statute, at least in the state of Iowa."

Following Dr. Wolfe's report, the House of Delegates gave a rising vote of thanks to Dr. Abbott and the members of his committee.

PUBLIC RELATIONS PROGRAM

Dr. O. N. Glesne, Fort Dodge, chairman of the Committee on Public Relations, delivered a report in which he referred to a resolution passed by the Executive Council, October 14, calling for the employment of a full-time field secretary and, if needed, public relations counsels. He said that his committee had considered this directive and had prepared a resolution for the consideration of the Executive Council, but since the Executive Council had not met since then, he asked permission to present the resolution to the House of Delegates. The Speaker ruled that this resolution should be introduced under New Business. Dr. Glesne reported that his committee had developed a tentative plan of public relations for the State Society which would be made known to the doctors sometime in the near future.

BLUE SHIELD

The Speaker of the House called on Dr. M. I. Olsen, Des Moines, chairman of the Subcommittee on Insurance, to deliver a report on recent communications between Iowa Medical Service (Blue Shield) and the Judicial Council of the AMA relative to joint billing. Dr. Olsen asked permission of the House to have Mr. W. H. Sherin, Executive Director of Iowa Medical Service, present this report. Mr. Sherin reviewed the correspondence between his office and the AMA, and said that he was not certain whether or not the AMA Judicial Council approved the new Blue Shield joint billing form. The letter from the AMA was referred to the Judicial Council of the Iowa State Medical Society for its consideration. Under new business, there is a supplemental report from the Judicial Council which refers to this subject.

The Speaker of the House called for any other old business. Dr. R. F. Birge, Secretary of the Society, moved acceptance of the reports of officers and committees presented. The motion was seconded and carried.

The Speaker of the House then called for new business. Dr. Birge moved approval of past actions of the House of Delegates, Executive Council and Board of Trustees to date relative to the problem of hospital-physician relations as outlined in his Secretary's report. The motion was seconded and carried.

RESOLUTIONS

The following resolution was introduced by Dr. Loren Parker, of Iowa Falls, a delegate from Hardin County, on behalf of the Sixth Councilor District:

"Whereas, the objective of the Iowa State Medical Society has always been to formulate its thinking for the best interest of the patient and to provide the best medical care for the patient, and

"Whereas, we know that where medical practice has been controlled by people outside the medical profession, the quality of medical care of the people has deteriorated, and

"Whereas, leadership in medicine has changed from Europe to the United States because medicine is not regulated or controlled, and

"Whereas, medical personnel of the world look to this country for training and leadership because it is the last bastion of free medicine and because our proved objective is the best care of the patient, and

"Whereas, American laws have recognized these principles and have emphasized that it is only the individual physician and not a corporation who can be trained and whose fitness and character can be tested, and

"Whereas, American law prevents the interposition of a third party between the physician and his patient, and

"Whereas, American law states that a physician cannot serve two masters, and his only master shall be the welfare of his patient, and

"Whereas, our American courts and American legislatures have stated that sound public policy should not allow such a condition to exist, and

"Whereas, the hospital licensing board of Iowa under Rule 27 has stated that a pathological laboratory should be in charge of a physician, and

"Whereas, the Blue Cross-Blue Shield contract has already been completed making a transfer of these services and increasing the benefits to the policyholders of Iowa, and

"Whereas, the settlement offered to the hospitals has been fair and reasonable, protecting financial interests and every interest any patient could have, and has been fair and reasonable within the law to the doctor,

"Now, Therefore, Be It Resolved that (1) every effort be made at the local level to solve this problem; (2) that litigation be instigated if peaceful negotiations fail; and (3) that we be prepared to defend our principles if legislative action is taken."

Action: The motion was seconded and carried.

The following resolution was introduced by Dr. Frank Ober, of Burlington, on behalf of the Des Moines County Medical Society:

"Be It Resolved that the Des Moines County Medical Society go on record as favoring the settlement of the Hospital-Physician problems at the local level.

"Be It Further Resolved that the Des Moines County Medical Society approves in principle the activities and opinions of the Iowa State Medical Society and its constituent committees."

Action: The resolution was seconded and carried.

The following resolution was introduced by Dr. E. F.

Hagen, of Decorah, on behalf of the Winneshiek County Medical Society:

"WHEREAS, It should be, and is, the goal of the hospital and medical practitioners in the State of Iowa to provide the best medical care possible at a reasonable cost, and

"WHEREAS, the hospitals have established, equipped and maintained departments of radiology and pathology competently staffed and

"WHEREAS, the community hospitals have endeavored to provide the best diagnostic service for the community and medical staff and have used such profits as there have been from the said facilities to reduce the cost to the patient (averaging from 50c to $1.50 per day per patient) and

"WHEREAS, we believe that some of the material statements of fact presented to the Attorney General of Iowa when his opinion on this matter was solicited were not accurately presented (for instance, a. Our hospitals do not take x-rays without an order by a physician. b. Our hospitals do not hold themselves out as maintaining a radiology department with a physician in charge available for conference. c. Patients do not come to the hospital for laboratory procedures without the advice of a physician. d. The hospitals do not hold themselves out as maintaining a clinical pathology laboratory with a physician in charge available for conference.)

"NOW THEREFORE BE IT RESOLVED AS FOLLOWS:

"1. That the present hospital pathology and radiology arrangement be continued.

"2. That paragraph 8 of the contract under negotiation read: "the fees for pathology and radiology service in the hospital may be billed by the doctor or the hospital. When billed by the hospital, the name of the doctor shall appear thereon."

"3. That paragraph 9 of said contract as heretofore proposed be deleted.

"4. That the Iowa State Medical Society promote and support legislation, if such is needed, to enable the performance of the contract as proposed in this resolution."

ACTION: This resolution was disapproved by the House of Delegates.

The following resolution was introduced by Dr. E. L. Croxdale, of Villisca, on behalf of the Montgomery County Medical Society:

"BE IT RESOLVED that the Montgomery County Medical Society endorses the position taken by the Iowa State Medical Society in the current controversy with the Iowa State Hospital Association concerning the illegal practice of medicine by hospitals in this State.

"The County Society wishes to commend the officials and committees in the State Society for their efforts to end this controversy by negotiation with the hospital representatives.

"The County Society further wishes to express its hope that the Iowa State Medical Society will continue to insist that all points of agreement made with the hospital group meet the requirements of the laws of the State of Iowa and the ethical standards of the medical profession."

ACTION: This resolution was ruled out of order since it did not call for action by the Iowa State Medical Society House of Delegates. It was received by the Speaker and placed on file.

The following resolution was introduced by Dr. O. N. Glesne, of Fort Dodge, on behalf of the Committee on Public Relations:

"WHEREAS, the elected secretary is responsible for handling the correspondence and maintaining the records of the Iowa State Medical Society which enables him to have ready access to all actions taken by the Society, the establishment of policy, etc., and

"WHEREAS, it would seem proper for the secretary to be the pivot point when the Society is confronted with problems involving the release of information to the press, and

"WHEREAS, the secretary is elected for a term of three years, which affords continuity for this purpose (An analogy to this situation is the arrangement in the office of the American Medical Association where its General Manager and Secretary, Dr. George S. Lull, interprets the policy of the AMA to the press services through Mr. Leo Brown, Director of Public Relations.),

"NOW, THEREFORE, BE IT RESOLVED that the secretary and Executive Secretary shall make information available to the press on matters of policy only when its interpretation seems obvious, and

"BE IT FURTHER RESOLVED that when a question of interpreting the policy of the Society arises, the secretary shall seek the advice and counsel of the president and other officers of the Society in addition to the members of the Public Relations Committee."

ACTION: This resolution was seconded and carried.

The following resolution was introduced by Dr. W. M. Sproul, of Des Moines, on behalf of the Polk County Medical Society:

"WHEREAS, the current controversy between the Iowa Hospital Association and the Iowa State Medical Society has far reaching implications which can and will involve every practicing physician in America unless a satisfactory solution can be reached here in Iowa, and

"WHEREAS, events have suggested to us that the Iowa Hospital Association representatives seem to be deriving strength of various sorts from outside our State, indicating that the conflict in Iowa is a pilot attempt to gain legal approbation of new ideology which will permit direct hiring of physicians by hospitals and corporations for the purpose of practicing medicine, and

"WHEREAS, doctors in all other states should have the opportunity to ascertain 1. the true facts involved, 2. the events which have transpired, 3. the present status of this unfair medical debacle and be apprised of the eventualities as we see them

"THEREFORE BE IT RESOLVED, that the Secretary of the Iowa State Medical Society be instructed to prepare, at once, a suitable abstract of the material named in paragraph 3 of the preamble and dispatch it, together with a copy of this resolution, as passed by this special session of the House of Delegates of the Iowa State Medical Society on December 12, 1954, to the secretary of the Medical Society of each State of the United States."

ACTION: The resolution was amended by the House of Delegates to permit the mailing of material referred to above to all members of the House of Delegates of the AMA. Approved as amended.

Dr. O. N. Glesne introduced a second resolution on behalf of the Committee on Public Relations which

read as follows: I move that the Board of Trustees be empowered to activate the public relations plan submitted by the Public Relations Committee.

Action: The motion was seconded and carried.

Dr. Oscar Alden, of Red Oak, Councilor for the Eleventh District, called to the attention of the House a statement which appeared in the October, 1954, edition of "Trustee" a magazine published by the American Hospital Association. He asked permission of the House to refer this material, specifically a paragraph on page 23, to the Judicial Council of the Iowa State Medical Society for study. The paragraph to which Dr. Alden referred is as follows:

"The contract of appointment to the medical staff of a hospital also implies sincere, loyal cooperation with the administration in all its activities. Loyalty demands support of the hospital management in its policies, rules and regulations, both inside and outside the hospital walls. Criticism of the hospital to the community is disloyal. The proper place for criticism of the hospital administration is at the meeting of the medical staff or in the joint conference committee. A breach of loyalty to the hospital might be a cause for dismissal of the physician from the medical staff because it tends to undermine the public faith in the institution."

Action: The House voted approval of his request.

The morning session of the House of Delegates was adjourned at 12:30 p.m., and the afternoon session convened at 2:00 p.m.

The first order of business was the consideration of a resolution from the Sixth Councilor District involving finances, which had been referred to the Board of Trustees for study. Dr. W. L. Downing, chairman of the Board of Trustees, presented the resolution to the House with amendments to the two final paragraphs. This resolution had been presented under the heading of New Business. Since it involved finances it was not acted upon immediately by the House of Delegates but was referred to the Board of Trustees for study and recommendation. The resolution was presented by Dr. D. D. Harris, Marshalltown, on behalf of the Sixth Councilor District. The resolution as amended read as follows:

"Whereas, the financial report of the Iowa State Medical Society reveals that funds would not be available to underwrite the expense of a comprehensive educational and public relations program directed toward preserving the Medical Practice Act in its present form, and

"Whereas, negotiations between the Iowa State Medical Society and the Iowa Hospital Association have reached a point where it seems legal or legislative actions are the only channels left open for settling the hospital-physician problem, and

"Whereas, considerable expense would be involved in an all-out campaign to uphold the principles of the Iowa State Medical Society, which would mean preserving the Medical Practice Act, and

"Whereas, this expense was not anticipated in the 1954 budget, nor has it been figured as a part of the regular 1955 budget, and

"Whereas, the Medical Society has a reserve in the amount of $60,000 invested in bonds; now therefore be it

"Resolved, that the House of Delegates request the Board of Trustees to allocate not to exceed fifty per cent of this reserve for use in educational and/or public relations and/or such activities as are necessary, and be it further

"Resolved, that should the expense of such educational and public relations activity exceed fifty per cent of the reserve, the Board of Trustees be authorized to impose additional dues up to $25.00 on all dues paying members to become payable upon receipt of the notice.

Action: The resolution, as amended, was approved by the House of Delegates.

The chairman of the Judicial Council, Dr. O. D. Wolfe, presented a supplemental report of the Judicial Council relative to the joint billing form which had been developed by Blue Shield. It read as follows:

"The Judicial Council of the Iowa State Medical Society has previously studied and approved the DIRECTIONS FOR PAYMENT OF CLAIMS submitted by Iowa Medical Service in the interest of facilitating the payment of medical and surgical benefits where two or more physicians have participated in the care of the patient. It has been our recommendation that this proposed plan be referred to the Judicial Council of the AMA for further approval. This recommendation has been consummated, and the letter written by the Judicial Council of the AMA to the Iowa Medical Service has been read to the House of Delegates of the Iowa State Medical Society in special session December 12, 1954.

"It is the opinion of the Judicial Council of the Iowa State Medical Society that the opinion rendered by the Judicial Council of the AMA is ambiguous and evasive although there is nothing in the opinion which states that such directions for payment are unethical. Since the establishment of such a procedure is imperative to permit physicians to ethically submit statements and receive payment for services rendered, the Judicial Council of the Iowa State Medical Society declares that this form and procedure are ethical, and we recommend that this mechanism be implemented as soon as possible."

Action: This supplemental report was approved by the House of Delegates.

Mr. I. W. Myers, legal counsel for the Society, was given the privilege of the floor to discuss some of the recent publicity relative to the physician-hospital controversy and also to explain the Blue Cross-Blue Shield pooling agreement which has been developed by these two organizations to handle the transfer of medical service benefits from Blue Cross to Blue Shield. This agreement will make it possible for Blue Shield to pay for the services of physicians including radiology, pathology and anesthesiology. A portion of the premium income of Blue Cross will be set aside for Blue Shield to use in paying for these services. In effect, it will be pooled with that portion of the Blue Shield premium which is set aside for anesthesiology and radiology benefits. This pooling agreement will not become effective, however, until after the over-all hospital-physician problem is solved by the two state organizations.

Dr. D. C. Conzett, of Dubuque, delegate from the Dubuque County Medical Society, made a motion in which he requested the House of Delegates to authorize the Board of Trustees to investigate the advisability of allocating funds to be used for the purpose of establishing a hospitality suite as a headquarters for the

Iowa State Medical Society delegates to the AMA. His motion was approved and it was referred by the Speaker to the Board of Trustees for study and report at the annual meeting in April.

The Speaker of the House asked the delegates to express their appreciation to the members of the Blue Shield Physician Relations Department for their work as sergeant-at-arms at this meeting. A round of applause was accorded them.

Dr. W. D. Abbott and Dr. F. C. Coleman, Des Moines, were asked by the Speaker to comment on the recent meeting with the joint committee of the AMA and AHA relative to the hospital-physician relations problem. They informed the delegates that no official word had been received from the joint committee but they expected to hear from these national groups sometime in the near future. Both speakers told the House that it was their opinion that the AMA is in support of the Iowa State Medical Society's position on this subject.

The Speaker offered a final call for new business. There was none. The House adjourned at 2:30 p.m.

INTERIM SESSION OF THE HOUSE OF DELEGATES

American Medical Association

November 29-December 2, 1954
Miami, Florida

The House of Delegates met Monday, November 29, and Wednesday, December 1. The delegates considered 32 resolutions and officer and committee reports. Reference committees considered all of these resolutions and reports. Dr. D. C. Conzett, of Dubuque, a delegate from Iowa, served as chairman of the Reference Committee on Sections and Section Work. Other Iowa physicians who took an active part in the work of the House of Delegates and reference committees were Iowa State Medical Society Delegates Dr. George Braunlich, Davenport, and Dr. D. F. Ward, Dubuque. Dr. G. F. Harkness, Davenport, participated in the business of the House, representing the Section on Laryngology, Otology and Rhinology.

In this report we shall refer only to the actions of the House of Delegates which seem to contain the greatest immediate interest. A complete record of all the transactions of the House of Delegates will appear in one of the early editions of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

REGISTRATION

The 3167 physicians, 3441 guests (including residents, interns, nurses and others) and approximately 900 exhibitors and exhibitors' guests, made up a grand total of more than 7500. It is estimated that approximately 25 Iowa physicians registered for this interim session.

OSTEOPATHY

The House of Delegates accepted the following report of the Board of Trustees on osteopathy: Contingent on the receipt of the report from the Committee to Study the Relations Between Osteopathy and Medicine of its "on campus" observations of osteopathic schools, the House of Delegates in June, 1954, agreed to hold in abeyance any action on this important subject until this meeting. The Committee, after meetings and extensive negotiations with the American Osteopathic Association, has now made final arrangements for visiting five of the six schools of osteopathy, and these plans have been approved by the Board of Trustees. It is the recommendation of the Board, therefore, that consideration of this matter be held in abeyance by the House of Delegates until the June, 1955, meeting, at which time the Committee expects to have a complete report of its findings concerning the nature, scope and quality of education in schools of osteopathy.

VETERANS' CARE

Mr. Seaborn P. Collins, National Commander of the American Legion, addressed the House of Delegates. He called upon the AMA to participate in a joint Legion-AMA study of veterans' hospitalization, aimed at removing the issue "from the area of name-calling and propaganda." He informed the delegates that he was prepared to appoint qualified American Legion representatives to serve on such a committee. Before the interim session was adjourned, the Board of Trustees of the AMA announced appointment of a three-man committee to meet with the Legion on the issue of veterans' medical care. The members of the AMA committee are Dr. Elmer Hess, President-elect; Dr. David Allman, Trustee; and Dr. Louis Orr, chairman of the Committee on Federal Medical Services.

COMMISSION TO STUDY HEALTH PLANS

The Board of Trustees of the AMA announced the appointment of a thirteen-member commission to make a comprehensive survey of the various types of plans through which the American people receive medical service. The commission will be headed by Dr. Leonard W. Larson, of Bismarck, a past president of the American Society of Clinical Pathologists and a member of the AMA Board of Trustees for the past five years. According to Dr. Larson, the AMA has undertaken this study because of the current interest in medical care plans on the part of physicians, the federal government, and the people, and, further, because the AMA has felt for some time that a complete factual study of all types of plans is needed. The survey, he said, will include both medical- and lay-sponsored plans. The work of the commission will begin immediately, and will require at least a year. Dr. Larson said that the new commission will inquire into the nature and operation of medical service plans and into the quality of medical care provided, as well

as into the legal and ethical status of the various arrangements now being used. In addition to the twelve doctors who will serve on this commission, there will be one layman, Mr. Jay Ketchum, Detroit, executive vice-president of Michigan Medical Service, a physician-sponsored plan.

REINSURANCE

A highlight of the House of Delegates meetings was a discussion of reinsurance by Mrs. Oveta Culp Hobby, HEW Secretary, and Mr. Edwin J. Faulkner, of Lincoln, Nebraska, president of the Woodmen Accident and Life Company. These two national figures entered into what might be classified as a friendly debate without opportunity for rebuttal. The very attractive Mrs. Hobby spoke in favor of the President's reinsurance program, and Mr. Faulkner in direct opposition. To quote Mrs. Hobby, "We have agreed [referring to the AMA], for example, that the system of voluntary health insurance is a mechanism through which the majority of Americans can help pay their medical costs. We are on common ground in the objective of strengthening and supporting the healthy growth of this system." Continuing, she said, "The President has proposed a system of health reinsurance which in our opinion would further this mutual objective. In brief, despite the remarkable gain in the number of people having some protection from prepaid insurance and the increase in insurance benefits, the dollar gap between total private expenditure for medical care and that part paid for by insurance continues to widen."

Following Mrs. Hobby to the rostrum, Mr. Faulkner said that the reinsurance plan would add nothing to the present rapidly expanding and successful health insurance field. He also told the delegates, "Those who oppose the establishment of a federal health reinsurance plan believe it would raise false hope for a more rapid expansion of health insurance while contributing nothing to the realization of that hope. Government reinsurance of health insurance plans would introduce no magic into the field of financing health care costs." It seemed obvious from the contrast in applause given these speakers that the delegates were almost unanimously in complete agreement with the comments of Mr. Faulkner.

AMA DIVISION OF GERIATRICS PROPOSED

The House of Delegates recommended that the Board of Trustees establish a division of geriatrics within the AMA. The purpose of the division would be to coordinate the work of already existing or that of new state and local groups on geriatrics, to educate the public to the needs of the increasing older-age groups, and to advance medical care rendered to older persons.

PHYSICIAN-HOSPITAL RELATIONSHIPS

A resolution was introduced by the Indiana State Medical Association on physician-hospital relationships and was approved by the House of Delegates. The recommendations contained in the resolution read as follows: "Resolved that the principles of physician-hospital relationships as outlined in the guides of 1951 be reaffirmed by the House of Delegates of the American Medical Association; and be it further resolved that these guides of 1951 serve as the basis for the consideration of the physician-hospital relationships by the joint committee of the Boards of Trustees of the American Medical Association and the American Hospital Association."

MEDICAL ETHICS

Accepting a recommendation contained in a report of the Council on Constitution and By-laws, the House amended Section 7 of Chapter I of the Principles of Medical Ethics so that it now reads as follows on the subject of patents and copyrights: "A physician may patent surgical instruments, appliances and medicines or copyright publications, methods and procedures. The use of such patents or copyrights or the receipt of remuneration from them which retards or inhibits research or restricts the benefits derivable therefrom is unethical."

GRIEVANCE COMMITTEES

The House of Delegates endorsed the principles of two nearly identical resolutions introduced by Colorado and Mississippi intended to improve efficiency and maintain high standards in the operation of grievance or mediation committees. These resolutions requested the Board of Trustees to appoint a committee to study and report on recommended standards for the operation of such services. Both resolutions emphasized the valuable public service aspects of mediation committees and suggested that the committee appointed by the Board of Trustees be composed of representatives from constituent societies in which grievance committees have been effective and useful.

DOCTOR DRAFT

The following policy relative to the doctor draft law was adopted by the House of Delegates: (A) That on the basis of current information the House of Delegates commend and express itself as being in complete accord with the Board of Trustees and its Council on National Defense that the "Doctor Draft Law" should not be extended after June 30, 1955, and that the House of Delegates further express its confidence in the ability of the Board of Trustees and its Council on National Defense to give proper attention to any new situation which may develop in regard to this highly complex and involved problem. (B) That the Board of Trustees and its Council on National Defense continue to study the problem of providing the best possible medical service for members of the armed forces and that they make recommendations to the Department of Defense at the earliest possible time for a more permanent solution to the problem, giving special attention to the further development of a career medical corps, with adequate compensation therefor.

PUBLIC RELATIONS CONFERENCE

The Seventh Annual Medical Public Relations Conference of the AMA was held at Hotel McAllister, Miami, November 28. It seemed to be the consensus of those who had attended previous public relations conferences sponsored by the AMA that this one was the outstanding to date. Everyone seemed to agree that the presentation by Mr. Leo Brown, Director of Public Relations of the AMA, was the highlight of this conference. In his address, he referred to a new manual which had been developed by the Department of Public Relations entitled "County Medical Public Relations." It will serve as an aid and guide to local public relations leaders in the development of a public relations program. It is very complete and covers every facet of medical public relations, with emphasis on eight basic projects for county medical societies:

1. Emergency call systems.
2. Mediation committees.
3. Developing good press relations.

4. Speakers' Bureau.
5. Indoctrination of society members.
6. Providing medical care for all, regardless of ability to pay.
7. Initiation of public service projects.
8. Citizenship activities.

We have been supplied with copies of this manual. A copy of the manual should be in the hands of an official of each county medical society sometime soon after the first of the year.

Those in attendance at the public relations conference were shown a television film entitled "A Life to Save." This film is extremely effective in pointing out the work of organized medicine in eliminating quacks. It was professionally produced and should be well received by any lay audience. Incidentally, this film was shown as a part of the Iowa State Medical Society's recent series over WOI-TV, Ames.

GENERAL PRACTITIONER OF THE YEAR

Dr. Karl B. Pace, of Greenville, North Carolina, was named the outstanding general practitioner for 1954 by a special committee of the Board of Trustees. Dr. Pace received the medal and citation awarded each year to the family doctor who has contributed outstanding community service. Dr. Walter B. Martin, of Norfolk, Virginia, president of the AMA, made the presentation.

AMA MEETING PLACES

The 1955 annual meeting of the AMA will be held in Atlantic City, New Jersey, June 6-10. In 1955, the clinical session will be held in Boston; in 1956 at Seattle; and in 1957 at Philadelphia.

Respectfully submitted,
George Braunlich, M.D.
Donald C. Conzett, M.D.
Donovan F. Ward, M.D.

HEALTH COSTS ESTIMATED AND SUBDIVIDED

The Federal Social Security Administration has estimated the nation's private medical bill for 1953 at $9,866,000,000, of which, it says, about 20 per cent was met by health plans. Hospital bills were 41.4 per cent covered, and physicians' bills 20.7 per cent.

Of the total costs, physicians' services, the agency reports, accounted for less than a third (28.6 per cent), whereas hospital charges made up 29 per cent, medicines and appliances 22 per cent, dentists' fees 9.6 per cent, other professional services 5.7 per cent, and health insurance 4.9 per cent.

REPEATS GIFT TO ED. FUND

Without being solicited to do so, The Picker X-ray Company, of Sioux City and Des Moines, has repeated the contribution it made last April to the Iowa State Medical Society's Educational Fund, from which loans are made to students in medical schools. The other firms that responded to the plea for funds last spring include The Benson Optical Company, of Minneapolis, and Professional Management, of Waterloo.

IRON LUNG?—NOT FOR ME!

I will never give my doctor permission to place me in an iron lung. I would far rather die than risk being kept alive, a total and permanent invalid. I reached that decision after surviving a severe attack of poliomyelitis in 1951 and experiencing for many bitter months the mental anguish of extreme shortness of breath and nearly useless arms.

There is much misconception about what an iron lung can do and cannot do, and the reasons for refusing iron lung treatment are little known. My position is as follows: No patient should be placed in an iron lung without first having given his consent; and no person should give his consent without considering the risks involved.

The decision to place a patient in an iron lung is frequently far more fateful than the decision to perform an operation, for the patient may be irrevocably condemned to complete and total invalidism for the rest of his life.

The *reasons* for my decision never to allow myself to be placed in an iron lung (or rocking bed) are as follows:

1. Poliomyelitis patients who have *only partial paralysis* of their breathing muscles probably can recover without the use of an iron lung.

2. Patients who remain for their whole lives, hopelessly crippled by *total* or *nearly total* paralysis of the breathing muscles and the muscles of their arms would have mercifully died in a few hours if they had not been placed in a lung.

3. The physician *must advise* the use of the iron lung when he sees that his patient is dangerously short of breath, but the patient *need not accept* this advice. He must remember that once he is placed there, no one can remove him, even if every muscle in his body is totally and permanently paralyzed. Unless he recovers his ability to breathe by himself, he is doomed to be kept alive indefinitely.

4. The number of patients being kept alive by iron lungs grows every day. There are now whole hospitals devoted to nothing but the care of these patients.

5. In addition to the patients kept alive inside iron lungs, there are thousands of others whose condition is nearly as pitiable. They are those whose lives have been saved by the iron lung and who regain just sufficient strength to breathe while lying quietly in bed.

6. It is important to understand the vast difference between paralyzed arms and paralyzed legs. Many persons, including the late Franklin Delano Roosevelt, have overcome the handicap of paralyzed legs, but the combination of paralyzed arms and breathing muscles is an insurmountable obstacle to any type of useful sustained activity on an independent basis.

7. Everyone should realize that in poliomyelitis the degree of paralysis and the amount of recovery are based entirely on how badly damaged are the nerve centers in the spinal cord. This damage is beyond human ability to alter in any way. All the physician and the patient can do is make the most of what remains when the attack is over. The iron lung cannot save or restore even a single nerve fiber that has been destroyed by the poliomyelitis virus.

8. Finally, the patient must consider his family, as well as himself.

As far as I am concerned, I would rather put my faith in Providence than in a man-made machine which has caused much more suffering than it has relieved.

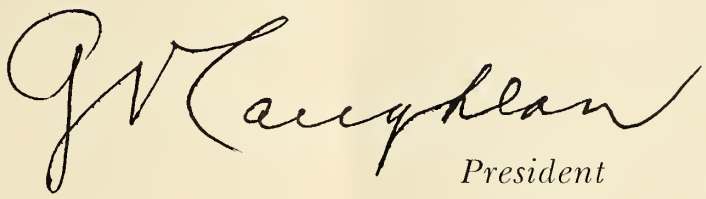
LOUIS SHATTUCK BAER, M.D., in *California Medicine*, Dec., 1954, pp. 420-421

President's Page

The Iowa State Medical Society, after its called meeting of the House of Delegates on December 12, 1954, begins the year as a closely-knit organization. In unity there is strength, and strength will be needed if we are to cope with the problems confronting us. They will be many.

We know there will be resistance from the hospitals on the transfer of medical practice to physicians. No doubt, too, this year will see some phase of prepayment cooperative medicine come into the Iowa picture. The basic problem posed by these practices seems to be the ability of the plans and hospitals to employ physicians to accomplish their objectives. If medical students and young physicians could be thoroughly grounded to resist them, these exploitations could not flourish.

Every experienced physician should undertake the responsibility to advise these young people as regards their duty toward the medical profession, which has done and yet will do so much for them.



President

Iowa Academy of General Practice

President—Frank D. McCarthy, M.D., Sioux City
President-Elect—William M. Sproul, M.D., Des Moines
Vice President—Charles A. Nicoll, M.D., Panora
Secretary-Treasurer—Donald H. Kast, M.D., 720 Bankers Trust Bldg., Des Moines
Executive Secretary—Mrs. Elizabeth B. Nelson, 3600 Franklin Ave., Des Moines

POSTGRADUATE COURSE

sponsored by the
Iowa Academy of General Practice
and the
General Practice Department of the Iowa Methodist Hospital

Fourth-floor Conference Room of the Iowa Methodist Hospital

Thursday, January 20, 1955

8:30 a.m.	Registration, in the hospital lobby
9:30 a.m.	Pediatric Clinic—Dr. Lee Forrest Hill and the staff of Blank Memorial Hospital
10:30 a.m.	Diagnostic Chest Clinic (medical and surgical)—Dr. Ralph A. Dorner, with a bronchoscopist, a radiologist and a bacteriologist
11:30 a.m.	Address: "Is Hysterectomy the Best Answer to Your Patient's Problem?"—Dr. M. Edward Davis, the Joseph Bolivar DeLee Professor and Chairman of the Department of Obstetrics and Gynecology, University of Chicago Medical School and the Chicago Lying-in Hospital
1:00 p.m.	Luncheon, in the hospital cafeteria
2:00 p.m.	Diagnostic Heart Clinic (including angiocardiography and cardiocatheterization)—Dr. Harold Margulies and the Heart Station group
3:00 p.m.	Office Hematology—What to Do, and How to Do It Well (What do you need? How do you use it? How do you interpret results?)—Dr. Herman J. Smith and Dr. John Green
4:00 p.m.	Obstetric and Gynecologic Clinic—Dr. M. Edward Davis and the OB staff

CHANGES IN POSTGRADUATE REQUIREMENTS

Recently, the Commission on Education of the American Academy of General Practice established some new and definite standards as regards the postgraduate training required of members of the Academy. It has been known for some time that changes were coming and that the requirements would be tightened. The new regulations will raise the quality of our membership to a much higher plane than before. They have now taken effect (January 1, 1955), but it is well for us to note that all credit hours for courses taken prior to the start of this calendar year will be evaluated according to the old standards and that none will be lost as the result of the change.

For courses taken henceforth, the following are the limitations:

"Study course credit (formal)

a. Any postgraduate course given by an accredited medical school or recognized postgraduate medical school

b. Any course initiated by the AAGP or by any of its constituent chapters, integrated by a medical school administrator, approved by the regional advisor of the Commission on Education, and processed and disseminated by the AAGP or its constituent chapter

c. The Annual Scientific Assembly of the AAGP

d. The Annual Scientific Assembly of each state chapter, providing it be approved in advance by the regional advisor for the Commission on Education

e. The publication of scientific papers, which shall receive five hours' credit if published in a state journal and fifteen hours' credit if published in a national journal."

"Medical meeting and assembly credit (informal) [the following list is incomplete]

a. The scientific meetings of the AMA

b. Local and state medical society scientific meetings

c. Hospital staff scientific conferences and clinical pathologic conferences

d. Postgraduate seminars and assemblies

e. Scientific programs given by the American Heart Association, the American Cancer Society, etc.

f. Postgraduate assemblies, meetings and courses given by the various clinical societies."

The requirements for continued membership in the American Academy of General Practice will be 150 hours of credit each three years, of which not fewer than 50 hours shall be "study course credit (formal)."

THE DOCTOR'S BUSINESS



The Doctor's Fees

MILLARD K. MILLS*

WATERLOO

The first step toward financial success, quite obviously, is an adequate patient load. Good public relations, combined with your ability to practice good medicine, will build one. However, even as many patients as you can efficiently care for will not mean financial security unless your fees are right!

Because your charges are important to your continuing to do good work, to the maintenance of your reputation and to your personal comfort, you should give a great deal of study and consideration to the establishing and, periodically, to the revising of your fee schedule.

The cost of living has increased to a far greater extent than have average medical fees, largely because many doctors are still charging as they did in the thirties and forties, despite the fact that all of their own expenses have risen. If, like them, you charge less than is reasonable, you not only deprive yourself of earned income, but you may cause your patients to question your ability!

Many Iowa doctors have now established a standard charge for all office procedures and a standard fee as a "guide" in surgical cases. They have been prudent in doing so. Yet many of these same men frequently lump their charges for multiple services rendered during one visit, and, in the process, invariably reduce their fees for consultation. Though they are entitled to a uniform recompense for the time they spend in consultation or treatment and for their services and skill, they aren't asking for it.

ESTABLISHING THE FEE SCHEDULE

How can you set up an adequate fee schedule for your office?

1. If your county medical society has a fee schedule, it is your best guide. However, be certain that it is a schedule of *averages,* rather than of minimums, as some are.

2. If your county medical society has no schedule, then get your colleagues together for a frank discussion of fees. Certainly doctors are reluctant to ask one another for information concerning fees, but remember that there is strength in unity and that working together will benefit all of you.

3. If you practice with a partner, be very certain that the two of you charge the same fees. If you differ, your patients will conclude either that one of you is money-hungry or that the other is a poorer physician.

4. Equate your fees with those of the other doctors in your community who engage in the same sort of practice. Patients recognize the right of the more highly trained physician to charge the higher fee, but they cannot understand differences between two general practitioners or between two practitioners of the same specialty. If there can't be uniformity, try, at least, to be neither the highest priced man in town, nor the lowest.

5. Your fees should be in line with your average patient's ability to pay. Don't let the poorest or the richest individual influence your decisions in establishing average fees.

6. Give the patient the best possible care and, when you have given consideration to his financial status, charge him accordingly. Too low fees will tend to lower the quality of the service rendered. There are no "bargains" in medical care.

VALUE OF FEE SCHEDULES

A fee schedule is the foundation on which you can build security for your family and yourself. It will help you maintain a degree of uniformity in the setting of extraordinary fees in special cases. It will enable your assistant, in most instances, to bill for services without disturbing you, and to answer inquiries altogether satisfactorily. Finally, it is a basis for explaining obstetrical and surgical fees prior to the rendering of service. And this is a *must* in patient relationships.

As a first step toward financial success, see that you have an adequate standard fee schedule for your office.

Mr. Mills is general manager of Professional Management.

BLUE CROSS  BLUE SHIELD

Proration of Fees

Many doctors have requested the establishment of a method whereby Blue Shield payments can be prorated among two or more physicians on a legal and ethical basis.

In response to the request of the Blue Shield Board of Directors for a study in this field, its legal counsel drew up such an arrangement and presented it to the Executive Council of the Iowa State Medical Society. That body approved it in principle on September 30, 1954.

The proration document was then presented to the Blue Shield Board on October 24, and it was approved, with the understanding that it would not be made available to member doctors without first being reviewed by the Judicial Council of the American Medical Association.

The AMA Judicial Council considered the proposal at meetings it held in Miami, at the time of the Association's clinical sessions, and released an opinion on it to Iowa authorities on December 11. That opinion was read at the called meeting of the Iowa State Medical Society House of Delegates, in Des Moines, on December 12, and was referred, by that body, to the Judicial Council of the State Society. The Council reported its approval of the proration document at a subsequent session of the House of Delegates on the same day.

Blue Shield officials are working on the plan with the expectation of putting it into effect in January, 1955, or very soon thereafter. They will forward information about it to every doctor, so that those wishing to avail themselves of the procedure may do so.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

STANDARD VALUES IN NUTRITION AND METABOLISM, by *Errett C. Albritton*, M.D. (Philadelphia, W. B. Saunders Company, 1954. $6.50).

REPRODUCTIVE SYSTEM, by *Frank H. Netter*, M.D. (Volume 2, The Ciba Collection of Medical Illustrations). Summit, New Jersey, Ciba Pharmaceutical Products, Inc., 1954. $13.00).

PEDIATRIC DIAGNOSIS, by *Morris Green*, M.D., and *Julius B. Richmond*, M.D. (Philadelphia, W. B. Saunders Company, 1954. $10.00).

THE CITY OF HOPE, by *Samuel H. Golter*. (New York, G. P. Putnam's Sons, 1954. $3.50).

DISEASES OF THE SKIN, for Practitioners and Students, by *George Clinton Andrews*, M.D. Fourth Edition. (Philadelphia, W. B. Saunders Company, 1954. $13.00).

CIBA FOUNDATION SYMPOSIUM ON HYPERTENSION (Humoral and Neurogenic Factors), by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Margaret P. Cameron*, M.A., A.B.L.S., assisted by *Joan Etherington*. (Boston, Little, Brown and Company, 1954. $6.75).

HANDBOOK OF MEDICAL TREATMENT, by *Milton J. Chatton*, M.D., *Sheldon Margen*, M.D., and *Henry D. Brainerd*, M.D. (Los Altos, Calif., Lange Medical Publications, 1954. $3.00).

REVIEW OF MEDICAL MICROBIOLOGY, by *Ernest Jawetz*, M.D., *Joseph L. Melnick*, Ph.D., and *Edward A. Adelberg*, Ph.D. (Los Altos, Calif., Lange Medical Publications, 1954. $4.50).

SPORTS INJURIES (PREVENTION AND ACTIVE TREATMENT), by *Christopher Woodward*. (London, Max Parrish and Company, Ltd., 1954. $3.00).

BOOK REVIEWS

(Additional Book Reviews on page 53)

PERIPHERAL VASCULAR DISEASES, by *William S. Collens*, M.D., and *Nathan D. Wilensky*, M.D. (Springfield, Ill., Charles C Thomas, November, 1953. $12.00).

This volume represents the second edition of a comprehensive textbook on diseases of the blood vessels. The entire vascular tree beyond the aorta, coronary arteries and vena cava is regarded as coming within the scope of the "peripheral" circulation. In this volume of more than 600 pages, circulatory disorders of the extremities receive the most attention, but there are separate chapters on vascular diseases of the brain and spinal cord, and of the skin.

Reflecting the extensive experience of the authors and an impressive list of contributors on special topics, the volume is a practical and useful guide to management. As a basis for methods of examination and differential diagnosis, the first section of the book is devoted to the anatomy, physiology and pathological physiology, symptoms and signs of peripheral vascular disease. Treatment is considered in detail in the second section of the volume. There is even a chapter by a podiatrist on the care of the feet in the patient with peripheral vascular disease. Basic considerations in fitting a prosthesis are considered by an orthopedic consultant, and there is a chapter by Smithwick and Robertson on surgical methods of treatment, a part of which is an excellent summary of the status of sympathectomy.

Typography and illustrations are of unusually high quality. The book should be an often-consulted reference in the practitioner's working library.—*H. J. Smith*, M.D.

FUNDAMENTALS OF OTOLARYNGOLOGY: A TEXTBOOK OF EAR, NOSE AND THROAT DISEASES, by *Lawrence R. Boies*, M.D., Second Edition. (Philadelphia, W. B. Saunders Co., 1954. $7.00).

The first edition of Dr. Boies' excellent text was well received in 1949, and the second edition follows the basic plan of the first. The book is intended to offer basic instruction and also fundamental information to the physician who is not a specialist. While the references for additional reading are not exhaustive, they offer a very adequate survey of current literature on the subjects discussed. In the opinion of this reviewer, this revised edition is a truly remarkable guide for the general physician and for the student in medicine or in an allied profession such as nursing. Moreover, it would serve the average otolaryngologist well as a ready reference and as an aid in explaining to his patients some of the intricacies of otolaryngological ailments.

The type and the paper are well chosen, and it is a very readable book. Diagrams, in particular, which are generously used throughout the volume, are clear and are not cluttered with highly technical terms. Photographic reproduction is excellent, and although there are no color plates, apparently nothing has been lost through this omission. The book is a compilation of very lucid discussions by authorities all of whom are vitally interested in teaching their subject.

Several sections are of particular interest to everyone. Chapter 10, "Aids to Hearing and Audiology," by Conrad J. Holmberg, M.D., represents a very good discussion of things that are being done today for the hard of hearing. Chapter 11, "The Applied Physiology of the Nose," by Anderson C. Hilding, M.D., is a very concise, accurate discussion of the important functions of the upper respiratory tract and can be understood and appreciated by every physician. Robert E. Priest, M.D., of Minneapolis, has written a section on "Disease of the Nasopharynx." He writes clearly, and his discussion tends to remove this area from the "filed and forgotten" status to which it seems to have been relegated. Dr. Boies' section on headaches is a classical and logical presentation, and, by itself, is worth the price of the book.

In keeping with the editor's objective of bringing the book thoroughly up to date, the section "Modern Medication in Otolaryngology" is up to the minute on current drugs and their usage, as well as on some of the older ones. Their rationale and their method of employment are very clearly presented. The chapter by Jerome A. Hilger, of St. Paul, on "The Possibilities of Transudate Disorders in Otolaryngology: Allergy, Autonomic Dysfunction and Endocrine Imbalance," serves well to focus the attention of the reader on this most recently changed concept in otolaryngology.

This book should be in the hands of every physician who is interested in the fundamentals of the specialty, for it provides him an excellent means for judging the caliber of work done by his consultants. And as I have said, the otolaryngologist would likewise be well advised to own it.—*Byron M. Merkel*, M.D.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

MEASLES

Deaths from measles, while somewhat reduced, still occur. The greatest number are in the first three years of life, with children less than a year old being hit harder than any other year group.

MEASLES CASES AND DEATHS IN IOWA

Year	Number of Cases	Number of Deaths
1937	280	4
1938	5,553	26
1939	5,064	29
1940	6,018	14
1941	5,167	16
1942	6,612	16
1943	5,903	18
1944	5,552	24
1945	1,279	4
1946	4,288	22
1947	4,627	3
1948	10,151	26
1949	3,453	4
1950	10,872	15
1951	2,808	3
1952	4,324	6
1953	11,196	10
1954 (through July)	12,296	7

The fact that measles can be, and frequently is, a severe disease in young children reminds us of the need for prophylactic use of gamma globulin in this age group. For the present, at least, gamma globulin is still available in amounts adequate to meet the needs of this group and of any older children who may be debilitated for any reason and who have been exposed to the disease. It is not, however, to be used in therapy for measles.

GAMMA GLOBULIN FOR MEASLES

Prevention:

1. For children under 3 years of age, to prevent bronchopneumonic complications
2. For older children, such as those having diabetes, rheumatic heart disease, severe attacks of asthma or other debilitating diseases which might be aggravated by an attack of measles
3. For measles-susceptible pregnant women in their later months of pregnancy, if the physician believes the measles might complicate either pregnancy or labor.

Modification:

For children between 3 and 5 years of age, to control the severity of the attack but to permit immunity to measles to develop.

DOSAGE FOR USE IN MEASLES

Since we find that most physicians requesting gamma globulin for measles are more certain of the ages than they are of the weights of their patients, dosages are given here in accordance with age. Weight dosage may be found in the instructions packaged with the gamma globulin.

Age	Prevention	Modification
Up to 6 months	2 cc.	——
6 months to 3 years	3 cc.	——
Over 3 years	1 cc. per year	0.2 cc. per year
Susceptible pregnant women	20 cc.	——

MORBIDITY REPORT

Disease	Nov. 1954	Oct. 1954	Nov. 1953	Most cases reported from these counties
Diphtheria	1	3	2	Grundy
Scarlet Fever	48	41	71	Des Moines, Montgomery, Polk, Webster
Typhoid Fever	2	1	1	Monroe, Scott
Smallpox	0	0	0	.....
Measles	126	71	284	Linn, Monona, Scott
Whooping Cough	35	47	111	Black Hawk, Dubuque, Scott
Brucellosis	14	24	21	Louisa, Woodbury each 2 —other scattered—1 to a county
Chickenpox	178	83	307	Buena Vista, Dubuque, Linn, Polk
Meningococcus Meningitis	1	5	1	Louisa
Mumps	371	100	161	Black Hawk, Monona, Polk
Poliomyelitis	80	266	39	Polk, Scott
Rabies in Animals	17	20	10	Hamilton 3, Woodbury 4, others scattered—1 to a county
Infectious Hepatitis	108	134	141	Allamakee, Black Hawk, Polk
Tuberculosis	38	42	67	For the state
Gonorrhea	53	94	55	For the state
Syphilis	114	150	151	For the state
Encephalitis	1	2	0	Lee

MEASLES DEATHS BY AGE IN IOWA

Year	Under 1 year	1 year	2 years	3 years	4 years	5-9 years	10-14 years	15-89 years	Totals
1949	2	1				1			4
1950	3	2	1	1		3	1	4	15
1951		2					1		3
1952	2	2	1				1		6
1953	3		1	1	1	1	1	2	10
Totals	10	7	3	2	1	5	4	6	38

TWO-VIAL DIAGNOSIS OF INTESTINAL PARASITES, STATE HYGIENIC LABORATORY, IOWA CITY

The two-vial procedure is designed to facilitate a complete diagnosis of parasitic forms other than pinworms that inhabit the intestinal tract. For pinworms, use the cellophane-swab or scotch-tape technic.*

COLLECTING STOOLS

Two stools must be submitted in special containers furnished by the State Hygienic Laboratory. Portions of each will be examined by both the formalin and the P.V.A. (polyvinyl alcohol) method. The directions given below must be followed exactly in obtaining and preparing the specimens.

a. The first stool should be obtained *without purgation of any kind.* The patient must not have had oil, barium or bismuth within 72 hours of stool specimen collection.

b. The second stool is to be obtained two days after the first, and is to be *a purged stool.* Two ounces of a saturated solution of sodium sulphate should be given the patient, preferably when he rises in the morning, and that dose should be followed by three glasses of water. Collect the specimen from the latter part of the purging.

PREPARING SPECIMENS

The vial labeled *formalin solution* is designed primarily to preserve hardy parasitic forms such as ova, cysts and larvae. Add one part stool to nine parts formalin solution, and mix thoroughly.

The vial labeled *P.V.A.* (polyvinyl alcohol) is designed to preserve the motile forms of amebae, ciliates and flagellates which normally disintegrate shortly after leaving the body. When the stool is diarrheal, add equal parts of stool and P.V.A., and mix thoroughly. If the stool is formed or mushy, add one part of stool to two parts P.V.A., and mix thoroughly. *The stool must be free of urine.*

It is imperative that the stool be placed in the solutions immediately after it has been passed, and that the ratios mentioned above be used. Failure to adhere to these directions will lead to unsatisfactory results, particularly for the forms mentioned in "b."

The administration of antibiotics or other antiparasitic drugs interferes seriously with the demonstration of amebae, ciliates, flagellates and other parasitic forms.

Use one applicator for adding stool to formalin, and another one for adding stool to P.V.A. *Be sure there is no cross mixture.* Mix each thoroughly.

Containers are distributed for immediate use only, because of the perishable nature of P.V.A.

* J. Iowa M. Soc., 44:225-226, (May) 1954.

BOOK REVIEWS

(Additional Book Reviews on page 51)

Cerebral Palsy, by *Cyril B. Courville,* M.D. (Los Angeles, San Lucas Press, 1954. $2.50).

Dr. Courville is a Los Angeles neurologist of wide repute, who has long been interested in the underlying causes of cerebral palsy, especially as regards its relation to cerebral anoxia. This monograph embraces a historical introduction, and chapter considerations of incidence, etiology, applied anatomy and physiology, pathology, syndromes, diagnosis, prognosis, therapy and practical considerations.

The author proposes to make clear the problems of cerebral palsy for the medical student, the general practitioner and the specialist. In his review, he also pays heed to "a new trend in the attack on the disease, one introduced even before the beginning of World War II, [which] is the association of lay and professional groups in an attempt to answer the questions posed by some particular group."

Cerebral palsy is the result of some physical insult to the immature or developing brain. The insult may be operative before birth (prenatally), during birth (paranatally), or following delivery (postnatally).

Prematurity, physical injury at the time of birth and asphyxia neonatorum are listed as the most important causes of cerebral palsy. Multiple etiologies and pathologies for cerebral palsy are emphasized and described, as well as a variety of motor syndromes.

The straightforward and concise presentation makes for easy reading. The reliability of the material is unquestionable. Dr. Courville has written and published studies on cerebral anoxia and its role in neurologic disease since 1936. This is the most pertinent work on cerebral palsy with which this reviewer is familiar.

Family doctor, pediatrician, orthopedist and neurologist—all of us either actively treat these patients or are asked for advice by their parents. The information in this monograph will help in preparing us for those responsibilities. This book is definitely recommended.—*John T. Bakody,* M.D.

The Manual of Antibiotics, by *Henry Welch,* Ph.D. (New York, Medical Encyclopedia, Inc., 1954. $2.50).

The manual hereinafter described is the first compilation of the list of preparations, indications for therapeutics, generic and trade names, and names and addresses of producers of all existing antibiotic preparations. For example, one single penicillin preparation has as many as 36 trade names. This attempt on the part of the manufacturer to sell more than one product by attaching a catchy name to it has confused the doctor and added immeasurably to the work of the pharmacist. Such a multiplicity of trade names is to be deplored, but apparently it is with us to stay. Consequently, such a volume as this is justified. It is written entirely in index form. Narrative discussion of "indications" is limited in each instance to one or two sentences.

The manual is intended primarily for the pharmacist, but might well be placed in the practicing physician's desk as a guide in his prescription writing. —*Daniel A. Glomset,* M.D.

WOMAN'S AUXILIARY NEWS

Mrs. Keith M. Chapler, *Publications Chairman,* Dexter, Iowa
President—Mrs. Lester R. Hegg, Rock Valley
President-Elect—Mrs. Charles H. Flynn, 709 W. 15th Street, Clarinda
Secretary—Mrs. Robert P. Mason, 5818 Chamberlain Drive, Des Moines 12
Treasurer—Mrs. Howard H. Smead, 3333 Grand Avenue, Des Moines 12

LINES FROM THE PRESIDENT

With a prayer for continued peace and with faith in the future, I wish each of you a most successful new year.

As we begin January, 1955, it is appropriate that we stop a minute to see where we are and where we are going. The realities of tomorrow come from today's meditation. Our membership is growing and will continue to grow as long as we remain determined to achieve the best in community health.

Wright, Cerro Gordo and Palo Alto counties are just beginning their existence as Auxiliaries. Winneshiek County is reactivated, and Scott County is considering membership in the state organization. There may be many more that desire the fellowship and service which our state program furnishes. It is urgent that those who are familiar with the Auxiliary's work should welcome and should assist the new members.

Last fall there were 39 counties with no members at all. Shall we try to decrease that number? One good way would be by recruiting members-at-large in the presently unorganized territory. The Fourth District Councilor, Mrs. Joe Krigsten, for example, has just reported five who have joined: Mrs. P. W. Brecker, Mrs. R. H. Prescott and Mrs. T. E. Shea, all of Storm Lake, Mrs. R. P. Noble, of Alta, and Mrs. Max Armstrong, of Newell. If nearby Auxiliaries will invite those ladies and other members-at-large to their meetings, together with other doctors' wives who may not yet have joined, and encourage their participation in Auxiliary work, additional counties can be activated rather quickly.

In recognition of the fine and loyal work that many members and county auxiliaries are doing, the Council of the Iowa State Medical Society, at its meeting on November 18, extended a vote of thanks to the Auxiliary. It went so far as to ask that each deputy councilor urge his county medical society to assist in organizing an auxiliary if it does not now have one, so that doctors' wives can be prepared to speak authoritatively to their friends and acquaintances on public issues affecting the medical profession and on the profession's manner of solving its problems.

The Council voted to send full information regarding the doctor-hospital problem not only to doctors but also to Auxiliary members, in the hope that correct information regarding the Society's standpoint can thus be more widely disseminated.

As president of the Woman's Auxiliary to the Iowa State Medical Society, I express for the members and for myself, appreciation and thanks to the Council for its confidence in us and in our organization. We shall be glad to cooperate in the ways that the Council has indicated.

ON THIS WE BUILD

Mrs. Lester R. Hegg
President

PRESIDENTS' CONFERENCE

The theme of the Eleventh Annual Conference of Presidents and Presidents-Elect, held in Chicago on November 16-18, was "Leadership in Community Health," and the speakers and panels presented a vast array of thought-provoking suggestions. Mrs. George Turner, president of the National Auxiliary, dealt with the worldwide phase of that leadership when she described the experiences she had recently in Europe and outlined projects that stay-at-home members can undertake. She attended the Munich and Berlin diplomatic conferences in October. She spent a month behind the Iron Curtain, and she launched balloons carrying propaganda to the enslaved peoples. In Berlin, she visited the CARE mission where 300 people a day are aided, and she told of presenting a CARE package in the name of the Woman's Auxiliary to an old gentleman who had been a chemist. She urges state and county Auxiliaries to donate money for CARE packages. "Work at the community level," she advised, "but keep your eyes on the world, for the world has its eyes upon us!"

Mrs. Mason G. Lawson, who as national president-elect presided at the conference, was one of the speakers who emphasized that if Auxiliary members are to achieve leadership in community health they need to reevaluate their emphasis on

their local communities and accept the challenge that is theirs as doctors' wives, not only to educate themselves but to take an active interest in the welfare of their own localities. They need to choose work in which they have been trained or are particularly interested, she said, and then they must contribute consistently to community life.

Other speakers dealing with the same aspect of the conference theme declared that doctors must "*preach* what they practice," but that they, and their wives with them, must be careful how they do it. Open meetings must be encouraged, at which lay people can discuss medical subjects with doctors. And as regards follow-up work, they cautioned that because rural people are particularly sensitive to insincerity, caution must be exercised that attempts to help them in the solution of their problems are never flash-in-the-pan campaigns, but, rather, are long-time programs of mutual and democratic participation. It was suggested, for example, that Auxiliary members volunteer to assist in 4-H group activities whenever their skills afforded them something to contribute. Civil defense preparations also were cited as projects in which Auxiliary members could learn to work with groups of their fellow citizens, and the spread of the habit of annual physical examinations was mentioned as one of the health ideas that they could urge upon the people whom they met by that means.

Mr. T. A. Hendricks, secretary of the Council on Medical Service of the AMA, was one of the speakers who stressed the work that members could do in their own homes toward the accomplishment of better community health. "Be informed!" he implored. "The most tragic thing in the world is ignorance in action. The American Medical Association needs you." And he took occasion to urge the improvement of reading habits even in doctors' sons and daughters. "The low standards of reading and amusement in our homes are reflected in the prevalence of comic books —the marijuana of the nursery," he declared.

Other speakers emphasized the maintenance of safety in the home, and listed the following measures that wives and mothers can take: (1) Make homes safe through the elimination of potential trouble spots; (2) Observe laws and ordinances; (3) Train baby-sitters in first-aid, so that they can become GEMS (Good Emergency Mother Substitutes); (4) Observe S-D Day (Safe Driving Day, December 15); (5) Prepare and distribute a community-service directory; (6) Take an active part in the pre-school roundup. Members of the Auxiliary were asked also to sponsor and help celebrate Doctor's Day, March 30.

Mrs. C. P. Pearson, who spoke on nursing, suggested that Auxiliaries give awards to girls who pass pre-nursing examinations in accredited hospitals, she proposed the setting up of Auxiliary booths at state fairs to attract girls who might be interested in careers in nursing and explain the advantages in their making such a choice, and she advocated the idea of holding annual Future Nurses Club teas during National Nurse Week, October 10-13.

One of the other ideas suggested for the expanding of the services provided by county chapters had to do with "homemaker service." To help in providing housekeepers or helpers for mothers who are convalescing after surgery, for new mothers who as yet are physically unable to care for themselves and their families, and for chronically ill mothers, some Auxiliaries are acting as clearing houses for domestic workers, are making special training available to women who seek such employment, and are in some cases subsidizing the service.

A more nearly complete report of this Conference will appear in the National Auxiliary BULLETIN.

COUNTY ACTIVITIES

Dallas-Guthrie

Ten members and three guests were present at the meeting of the Dallas-Guthrie Auxiliary in Panora on November 18. The Achievement Award Plan was presented by the president. Nurse recruitment was discussed at length, with Mrs. Shirley Wilson, the Guthrie school nurse, as guest speaker. Officers for 1955 include: Mrs. Allen Cochran, Perry, president; Mrs. William Castles, Dallas Center, president-elect; Mrs. H. W. Smith, Woodward, first vice-president; Mrs. Herbert Neff, Guthrie Center, second vice-president; Mrs. C. E. Porter, Redfield, secretary; and Mrs. William Seidler, Jr., Jamaica, treasurer.

Page

A Future Nurses Club was organized at the Clarinda High School recently, with 25 interested girls in attendance at the first meeting. Mrs. Ruth Harper, the public school nurse, and Miss Josephine Sherman, the home economics instructor, are to be the advisors. In the near future, Mrs. C. H. Flynn is to entertain the girls, together with the members of the Page County Auxiliary, at a tea in her home.

Polk

On October 22, the Polk County Medical Auxiliary had luncheon at the Standard Club, in Des Moines. Mrs. Maurice Rotkow, mental health chairman, with her assistants Mrs. Herman Smith and Mrs. Lee R. Pearlman, had charge of the meeting. Dr. Herbert C. Merillat, Des Moines psychiatrist, spoke on "An approach to Community Mental Health Problems." Following his

address, he answered questions and conducted a discussion regarding the mental health program and its purposes.

The November 19 meeting was held at the Cloud Room in the Des Moines Municipal Airport. The hostesses were Mrs. Henry Gurau, Mrs. Byron Merkel and Mrs. Addison Brown. Mrs. Ray Briar gave a demonstration of Christmas floral arrangements and holiday table decorations, and Mrs. Charles H. Flynn, president-elect of the State Auxiliary, after installing the new officers of the county Auxiliary, gave a report on the Eleventh Annual Conference of Presidents and Presidents-Elect which she had attended in Chicago.

Sioux

At the Community Hospital in Sioux Center, on November 27, the Sioux County Medical Auxiliary entertained 51 girls at a Future Nurses Club tea. They were welcomed by Mrs. Lester R. Hegg, Rock Valley, president of the State Auxiliary. The showing of a film "For You To Decide" and a discussion of nursing as a career followed. The discussion was led by Mrs. C. B. Murphy, of Alton, and Mrs. Ruth Eide, the county public health nurse. Afterwards, Mrs. C. Oelrich conducted the group on a tour of the hospital.

PROGRAMS SUGGESTIONS FROM NATIONAL

MENTAL HEALTH

Only recently has there been recognition of the ills, maladjustments and troublesome situations that are the consequences of mental illness. A study of mental health problems relating to family life, school, industry, religious work and national defense is highly necessary, but it calls for a background of information. The National Auxiliary mental health chairman can help in providing county chapters with what they need to start such a project.

Reading Material: "Emotional Health in Work and Play"—8pp., 15c. "Your Stake in Mental Health"—4pp., 10c. "Are Comic Books a Menace?"—8pp., 15c.

Transcription: "Why Do You Worry?"—a dramatization of problems in mental hygiene from infancy to middle age.

Motion Pictures: "Breakdown"—an appeal for greater understanding of mental illness through the story of a young girl's difficulties. 16mm., black and white, sound. Showing time 42 min. Produced by National Film Board of Canada. $3.00.

"The Nation's Mental Health"—the work of the National Association of Mental Health in helping communities set up mental health clinics. 16mm., black and white, sound. Showing time 19 min. Produced by March of Time, Inc. $2.00.

"Emotional Health"—a combination of action and cartoon sequences which explain functional disorders and principles of psychosomatic medicine. 16mm., black and white, sound. Showing time 20 min. Produced in 1947 by Audio Productions, Inc. Rent from producer, 79 East Adams Street, Chicago.

SAFETY

Safety, as a health measure in the community, should be stressed and should be an active project in every Auxiliary's program.

Consider safety for pedestrians. Last year 38,300 persons died as a result of traffic accidents. Proper vehicle maintenance, obedience to traffic rules, formulation of safety measures for older people and driver-education programs all are deserving of attention.

Reading Material: "A Calendar for Home Safety"—8pp., 15c. "First Aid Manual" (pocket size)—32pp., 10c. "Driver Education—a Course in Life Saving"—1p., free. W. A. Alexander & Co., Field Bldg., Chicago.

Exhibits: "How Safe Is Your Home?"—weight 124 lbs., requires on electric outlet, 250 watts.

"Home Accidents"—weight 612 lbs., requires one electric outlet, 500 watts.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa

Thursday at 11:15 a.m.

"PHYSICAL MEDICINE"

January 6 ..... In Bed or Out
January 13 ..... Occupational Therapy
January 20 .....Oxygen as Medicine
January 27 ..... Shoes, Artificial Limbs and Braces

WSUI—Iowa City, Iowa

Tuesday at 11:45 a.m.

"MUSIC WITH YOUR MEALS"

January 4 ..... The Luncheon Problem
January 11 ..... The School Lunch
January 18 ..... The Evening Meal
January 25 ..... Eating Between Meals

TELEVISION

KGLO-TV—Mason City, Iowa

Sunday at 5:30 p.m.

January 2 ..... What Does the Pathologist Do?
January 16 ..... How Are Anesthetics Given?
January 30 ..... Care of the Teeth

The broadcast schedule over WOI-TV—Ames, Iowa, is now scheduled to resume in April.

COUNTY SOCIETIES

MEETINGS

Black Hawk

At the December 21 meeting of the Black Hawk County Medical Society, at the Elks Club, in Waterloo, Dr. G. Davies, a member of the staff in the SUI Department of Anatomy, spoke on "Some Aspects of Medical Education and Practice in Great Britain."

Calhoun

Dr. W. W. Weber, of Pomeroy, has been elected president of the Calhoun County Medical Society. Dr. J. H. Faust, of Manson, is the new vice-president, and Dr. R. A. Lynberg, of Lake City, is secretary-treasurer. Dr. Paul Ferguson and Dr. D. S. Farago, both of Lake City, are delegate and alternate delegate, respectively, to the Iowa State Medical Society, and Dr. D. C. Carver, of Rockwell City was elected to a three-year term as censor.

Dallas-Guthrie

At the meeting of the Dallas-Guthrie Medical Society in Panora, on November 18, Dr. M. D. Ravreby, of Des Moines, spoke on coronary heart disease.

Johnson

Dr. William B. Bean, head of the Department of Internal Medicine at the SUI College of Medicine, addressed the December 1 meeting of the Johnson County Medical Society on "The Production of an Addison-Disease-Like State in Human Volunteers."

Keokuk

On the evening of December 2, physicians in the Ninth Councilor District, together with doctors from surrounding counties, met at the new county hospital in Sigourney to hear Dr. J. W. Dulin, of Iowa City, read a scientific paper and Dr. E. F. VanEpps, professor of radiology at SUI and secretary of the Council of the Iowa State Medical Society, discuss the hospital-physician problem. Members of the Woman's Auxiliary were also present at the dinner that preceded the meeting. Dr. E. B. Howell, of Ottumwa, councilor for the Ninth District, was ill and consequently unable to attend.

Page

At the November 18 meeting of the Page County Medical Society, at the American Legion Club in Shenandoah, Dr. Lee R. Martin, of Council Bluffs, spoke on the intramedullary fixation of fractures.

Polk

The January 19 meeting of the Polk County Medical Society, to be held at the Des Moines Golf and Country Club, in West Des Moines, will be the annual meeting for the election of officers.

Pottawattamie

At an open meeting of the Pottawattamie County Medical Society, at the Hotel Chieftain in Council Bluffs on November 16, W. D. Trotter, Ph.D., head of the speech clinic at SUI and a group of his students demonstrated techniques for the correction of stuttering.

The Society will establish four $250 scholarships for needy students at the SUI College of Medicine. The requisite fund has been set up for a ten-year period.

Scott

Dr. James B. Brown, professor of surgery at the Washington University School of Medicine, St. Louis, spoke to the Scott County Medical Society on December 7 about "Plastic Surgery and Its General Applications in Farm, Industrial and Traffic Accidents." At that session, Dr. Tom W. McMeans was re-elected public-relations representative for the Society.

At the January 4 meeting, Dr. H. B. Benjamin, assistant professor of anatomy at Marquette University School of Medicine, Milwaukee, will speak on "Plasma Expanders," and at the February 1 meeting, Drs. L. E. January, J. W. Culbertson and J. H. Ehrenhaft, all of SUI, will present a symposium on cardiac surgery. Visiting physicians who wish to attend will be made welcome.

Wapello

At the January 4 meeting of the Wapello County Medical Society, Dean Nelson, of the College of Medicine at SUI, will be the speaker. At the meeting on February 1, Frank G. Dickin-

son, Ph.D., director of the Bureau of Economic Research of the AMA, is to address the Society. Scientific sessions are held at the Ottumwa hospital. Dinner is at 6:30, and the program at 7:30.

DEATHS

Dr. Lee E. Shafer, 65, of Davenport, died at St. Luke's Hospital there on November 24, after an illness lasting only one day. He had had a stroke shortly after performing an operation on November 23.

Dr. Frederick John Graber, 86, of Stockport, who had been in at least partial retirement for a considerable number of years, died at a hospital in Fairfield on November 26.

Dr. George William Franklin, 78, of Jefferson, a Life Member of the Iowa State Medical Society, died at his home there on November 22.

Dr. Ernst Pfeiffer, 81, for 31 years a physician at Hartley, died at a hospital in Sioux City on October 29, after about a year's illness.

MENTAL ILLNESS

CHRONIC ALCOHOLISM—A MEDICAL PROBLEM

Alcoholism, much too generally, has been considered a responsibility of society as a whole. This attitude is the consequence of people's looking down on the alcoholic as someone who is no good, who wants to remain in a drunken state or who has gone beyond help. Thus, a solution for the problem has been sought through legal restraints and sanctions, and through the exhortations of reformers and church groups.

But it has now become apparent that alcoholism is primarily a medical difficulty, rather than one with which non-professional people can be left to cope. It cannot be legislated out of existence, for alcohol is present in nature, and until we can repeal the law of fermentation, it will continue to exist. And regardless of how good the moralists' arguments may be, they cannot be used in reforming alcoholics, for the compulsive drinker is not a free agent. In speaking of alcoholism, we must not confuse mere intoxication with problem drinking. When once the true alcoholic has taken a drink, he feels that he must continue to drink in order to drink away his drinking.

It is estimated that in Iowa today there are 34,000 people for whom liquor is a severe personal problem. Among those, one-fourth, or about 9,000, are of the "skid row" type that constitutes a definite challenge to physicians. Fundamentally, alcoholism is best defined as a disease in which adult individuals are psychologically unable to face their problems without drinking. But the addict's difficulty comes to include physical as well as psychological factors. Continuous drinking causes vitamin deficiency, which, in turn, entails complications such as liver cirrhosis, neuropathies (alcoholic neuritis), beriberi and pellagra-like symptoms, and even encephalopathy (delirium tremens). Those, of course, it is the doctor's business to treat, and they must be treated first.

When the physician has made the diagnosis of chronic alcoholism, he must insist on the patient's total abstinence from alcohol in any form (beer, wine, gin, rum, whisky and medications such as Elixir Terpin Hydrate). In the acute phase, the patient should be hospitalized to help him avoid drinking. Fluids, vitamins and sedatives are given him, and he undergoes a complete physical examination. An attempt is made to get the patient to recognize that he has a disease, and when he has been persuaded, the best available facility for helping in his rehabilitation should be called in. In Iowa, at the present time, the most effective assistance of this sort can be given by Alcoholics Anonymous. If necessary, the patient should be referred for psychotherapy.

Since alcoholism is largely medical, physicians must accept responsibility for it and must see to it that laymen are not left to attempt handling it alone. Doctors must avoid approaching alcoholics in a hypercritical, authoritative or disgusted manner, and they must treat them as sick people.

Here are the basic facts that must be remembered:

1. All alcoholics have a psychological basis for their drinking.
2. All alcoholics, at least potentially, remain alcoholics for life.
3. All alcoholics develop vitamin deficiency.
4. All alcoholics must have understanding friends and relatives, but most important of all, all of them must have understanding physicians.

NEW CIRCULATION RECORD

TODAY'S HEALTH, published by the AMA, reached a record high circulation of 340,000 copies with its October issue. The efforts of Auxiliary members helped greatly in this, its greatest success in its 31-year history. The magazine goes into the offices of 103,000 physicians and 45,000 dentists.

Dramamine's® Effect in Vertigo

Dramamine has become accepted in the control of a variety of clinical conditions characterized by vertigo and is recognized as a standard for the management of motion sickness.

Vertigo, according to Swartout, is primarily due* to a disturbance of those organs of the body that are responsible for body balance. When the posture of the head is changed, the gelatinous substance in the semi-circular canals begins to flow. This flow initiates neural impulses which are transmitted to the vestibular nuclei. From this point impulses are sent to different parts of the body to cause the symptom complex of vertigo.

Some impulses reach the eye muscles and cause nystagmus; some reach the cerebellum and skeletal muscles and righting of the head results; others activate the emetic center to result in nausea, while still others reach the cerebrum making the person aware of his disturbed equilibrium. *Vertigo may be caused by a disease or abnormal stimuli of any of these tissues involved in the transmission of the vertigo impulse, including the cerebellum and the end organs.*

A possible explanation of Dramamine's action is that it depresses the overstimulated labyrinthine structure of the inner ear. Depression, therefore, takes place at the point at which these impulses, causing vertigo, nausea and similar disturbances, originate. Some investigators have suggested that Dramamine may have an additional sedative effect on the central nervous system.

Repeated clinical studies have established Dramamine as valuable in the control of the symptoms of Ménière's syndrome, the nausea and vomiting of pregnancy, radiation sickness, hypertension vertigo, the vertigo of fenestration procedures, labyrinthitis and vestibular dysfunction associated with antibiotic therapy, as well as in motion sickness.

Any of these conditions in which Dramamine is effective may be classed as "disease or abnormal stimuli"* of the tissues including the end organs (gastrointestinal tract, eyes) and their nerve pathways to the labyrinth.

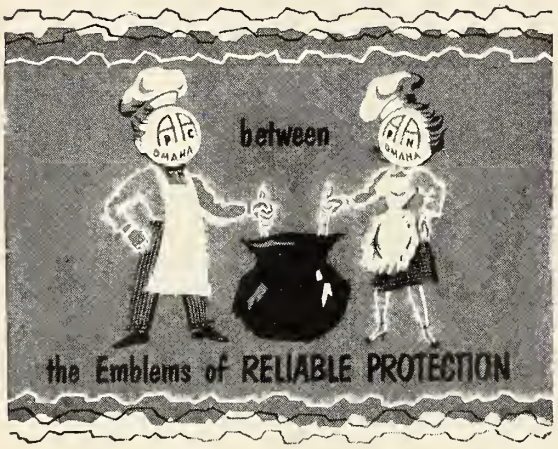
Dramamine (brand of dimenhydrinate) is supplied in tablets of 50 mg. and liquid (12.5 mg. in each 4 cc.). It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.



The site of Dramamine's action is probably in the labyrinthine structure.

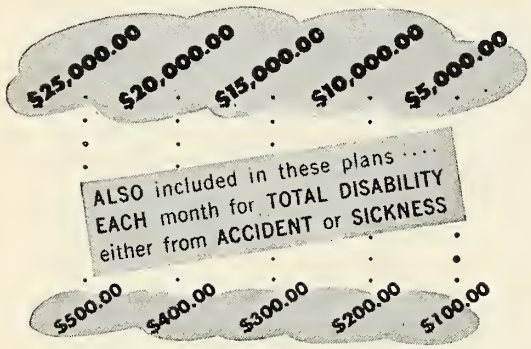
*Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

Something NEW is Cooking



MORE INSURANCE NOW AVAILABLE

think! HOW THESE AMOUNTS WOULD HELP IN PAYING ESTATE TAXES IN CASE YOU ARE ACCIDENTALLY KILLED . . .



SPECIFIC BENEFITS ALSO FOR LOSS OF SIGHT, LIMB OR LIMBS FROM ACCIDENTAL INJURY
HOSPITAL INSURANCE also for our members and their families

$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

The Month in Washington

Washington, D. C.—Because this is a new Congress and under new leadership, a number of new bills can be expected in the health field. But the Democrats also can be expected to devote a vast amount of time to health legislation that was previewed last session by the Republicans.

In fact, one of the more prominent bills on the list, that providing federal reinsurance of health insurance plans, was subjected to lengthy hearings before it finally met defeat in the House late in the last session. So thoroughly was it dissected then that it will be surprising if the friends of reinsurance can find anything else favorable to say about it, or its critics can find anything else wrong with it. How this Republican bill will fare in Democratic committees now is one big question.

There is always the possibility, of course, that some of the major bills to be presented again will be so amended that new decisions will be called for. For example, the administration's experts all fall have worked tirelessly to make the reinsurance bill more palatable.

Like the reinsurance bill, the proposal to revamp the procedure for distributing public health grants to states was well worked over last session. It passed the House, but the Senate committee was unable to untangle all the knots it discovered, so there was no final action. This, too, is up again this year, labeled as difficult and touchy, but nonpartisan.

Another well-advertised bill coming up for action is that to set up a program of contributory health insurance for federal employees. Last session, a Senate committee held a one-day hearing on this bill, admittedly merely to get the proposition "on the record" so it could be freely discussed between Congresses. A task force from the Civil Service Commission has been trying to hammer out a more workable version of the bill, and has found the task a formidable one. But despite the complications, Congress will be asked to enact some bill of this type.

Although the bill definitely is of Republican origin, there is no reason to expect that it will receive a hostile reception from the Democrats in either house. It is generally accepted as a too-long delayed attempt to bring the federal government into line with private industry.

The bill for expanding medical care for military dependents has about the same history. After months of planning and conferences, bills were introduced last year in House and Senate to get the idea out into the open for the benefit of Congress and the public. Because the plan is so highly controversial, however, no hearings were held last

To ease the blow when you say..."**No Salt!**"....



— gives a zestful "salty" flavor to the sodium-restricted diet — helps to keep the patient on the salt-free regimen by making meals tasty.

Neocurtasal may be used wherever sodium restriction is indicated — it is completely sodium-free. May be used like ordinary table salt — added to foods during or before cooking or used to season foods at the table.

WINTHROP

Neocurtasal

"...trustworthy non-sodium containing salt substitute"[1]

Supplied in 2 oz. shakers and 8 oz. bottles.

Write for pad of diet sheets.

1. Heller, E. M.: The Treatment of Essential Hypertension. *Conod. Med. Assn. Jour.*, 61:293, Sept., 1949.

CONSTITUENTS: Potassium chloride, ammonium chloride, potassium formate, calcium formate, magnesium citrate, potassium iodide (0.01%) and starch.

Winthrop-Stearns INC. New York 18, N. Y. Windsor, Ont. Neocurtasal, trademark reg. U. S. Pat. Off.

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
1202 Locust Street Telephone 2-6766

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

session. The same bill is going before Congress again.

Here the fundamental issue is whether military hospitals and uniformed physicians shall supply the preponderance of this service to dependents, or whether the dependents shall be treated largely by civilian physicians and in civilian hospitals.

Last session, the Defense Department prepared the draft of a bill to set up a number of military medical scholarships. Because bills originating in one department that might affect another first must be submitted to the latter for comment, this bill was turned over to Mrs. Hobby's Department of Health, Education, and Welfare. There it rested until after Congress adjourned. The 84th Congress will be asked to enact the bill, possibly as an alternative to extending the Doctor Draft, which is scheduled to expire next July 1.

Efforts will be made, but not necessarily with the Eisenhower administration's help, to enact some sort of legislation for federal guarantee of hospital mortgage loans. This subject was gone into in great detail last session by Mr. Wolverton's House Interstate and Foreign Commerce Committee, but the committee finally turned down Mr. Wolverton and refused to report the bill for action. It had widespread labor support last year, but was opposed by the AMA as discriminatory, in that it would offer more assistance to closed panels than to other forms of medical practice.

Indications are that Mrs. Hobby's department will sponsor legislation to aid medical schools, a subject which was not taken up in the last Congress but which attracted considerable attention in years past.

OB. & GYNEC. CONFERENCE AT OMAHA

On Thursday and Friday, January 20 and 21, 1955, The University of Nebraska College of Medicine will conduct a postgraduate course in obstetrics and gynecology, at Omaha. The University Extension Division of the Nebraska State Department of Health is to be a co-sponsor, and there will be no registration fee.

The faculty for the course will include Donald Freeman, M.D., clinical instructor at the University of Minnesota; Maurice Grier, M.D., chairman of the Department of Obstetrics and Gynecology at the Creighton University Medical School; Roy G. Holly, M.D., professor at the University of Minnesota; Leon S. McGoogan, M.D., chairman of the Department of Obstetrics and Gynecology at the University of Minnesota; Harold Morgan, M.D., clinical associate professor at the University of Nebraska; and Robert Wise, M.D., assistant professor of medicine at the University of Minnesota.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the JOURNAL, 529-36th Street, Des Moines 12, Iowa.

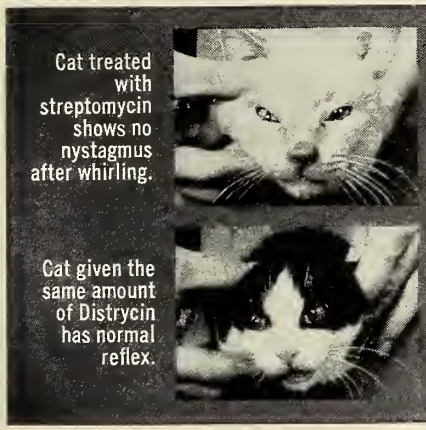
for greater safety in streptomycin therapy...

DISTRYCIN

Squibb Streptoduocin
Streptomycin and dihydrostreptomycin in equal parts

Distrycin has an important advantage over streptomycin. It has the same therapeutic effect but ototoxicity is greatly delayed. Since the patient is given only half as much of each form of streptomycin as he would have on a comparable regimen of either one prescribed separately, the danger of vestibular damage (from streptomycin) or cochlear damage (from dihydrostreptomycin) is significantly lessened.

Signs of vestibular damage appear in cats treated with Distrycin as much as 100 per cent later than in animals given the same amount of streptomycin.



On dosage of 1 Gm. per day for 120 days, ototoxicity was as follows*:

	Vestibular damage % of patients		
	Mild	Moderate	Total
Streptomycin	12	6	18
Dihydrostreptomycin	6	0	6
Distrycin	0	0	0

	Cochlear damage % of patients		
	Mild	Moderate	Total
Streptomycin	0	0	0
Dihydrostreptomycin	12	3	15
Distrycin	0	0	0

*Heck, W.E.; Lynch, W.J., and Graves, H.L.: Acta oto-laryng. 43:416, 1953.

Distrycin dosage is the same as for streptomycin. In tuberculosis the routine dose is 1 Gm. twice weekly, in conjunction with daily para-aminosalicylic acid or Nydrazid (isoniazid). In the more serious forms of tuberculosis, Distrycin may be given daily, at least until the infection has been brought under control.

SQUIBB

a leader in streptomycin research and manufacture

'Distrycin'® and 'Nydrazid'® are Squibb trademarks

Distrycin is supplied in 1 and 5 Gm. vials, expressed as base

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates, Spring 1955

SURGERY—Surgical Technic, Two Weeks, January 24, February 7
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, March 7
Surgical Anatomy & Clinical Surgery, Two Weeks, March 21
Surgery of Colon & Rectum, One Week, February 28
Basic Principles in General Surgery, Two Weeks, March 28
General Surgery, One Week, February 14; Two Weeks, April 25
Gallbladder Surgery, Ten Hours, April 11
Fractures & Traumatic Surgery, Two Weeks, March 14
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, February 14
Vaginal Approach to Pelvic Surgery, One Week, February 7
OBSTETRICS—General & Surgical Obstetrics, Two Weeks, February 28
MEDICINE—Two-Week Course, May 2
Electrocardiography & Heart Disease, Two Weeks, March 14
Gastroenterology, Two Weeks, May 16
Gastroscopy, Two Weeks, March 21
Dermatology, Two Weeks, May 9
RADIOLOGY—Diagnostic Course, Two Weeks, February 28
Clinical Uses of Radio Isotopes, Two Weeks, April 25
Radium Therapy, One Week, May 23
PEDIATRICS—Intensive Course, Two Weeks, April 4
Clinical Course, Two Weeks, by appointment
Cerebral Palsy, Two Weeks, June 13
UROLOGY—Two-Week Urology Course, April 18
Ten-Day Practical Course in Cystoscopy every two weeks

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 S. Wood St., Chicago 12, Ill.

POSTGRADUATE COURSES

in

PEDIATRICS

March 14, 15 & 16, 1955

Guest Instructors:

F. JOHN LEWIS, M.D., Ph.D., University of Minnesota.

SHERMAN LITTLE, M.D., University of Buffalo.

MARGARET H. D. SMITH, M.D., Tulane University of Louisiana.

Course will cover a variety of subjects but will emphasize Surgery of the Cardio-Respiratory Systems, Problems of Immunization, Meningitis, and Behavior Problems in Children.

* * * * *

THE PATHOLOGY OF CRIME—2 days, March 7 and 8
For Doctors of Medicine, Coroners, Law Enforcement Officials and Pathologists.

HEMATOLOGY—3 days, March 10 to 12
Limited enrollment.

ELECTROCARDIOGRAPHY—4 days, March 21 to 24

CHEST DISEASES—3 days, April 11 to 13
Limited enrollment.

GASTROENTEROLOGY—2 days, April 14 and 15
Limited enrollment.

* * * * *

For program announcement and information, write:

Extension Program in Medicine

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE

Kansas City 12, Kansas

PERSONALS

Dr. Eugene B. Becker, a graduate of the New York University College of Medicine, has joined the staff of Medical Associates, in New Hampton. He recently completed 28 months' service with the U.S.P.H.S.

After filling in while **Dr. G. M. Gibbs**, of Burlington, was on an extended vacation trip, **Dr. R. A. Vercio** has opened his own office for the practice of medicine there. Dr. Vercio studied medicine and did his internship at Los Angeles.

On November 19, **Dr. F. M. Skultety**, professor of neurosurgery at SUI, was inducted into the American College of Surgeons, at Atlantic City.

Dr. Edward F. Fleming, of Rockwell, sustained shoulder and back injuries in a grade-crossing accident near Minneapolis, on November 23. He is said to have been thrown about 25 feet after the car in which he was a passenger struck the side of a train about three feet behind the locomotive.

In mid-November, **Drs. E. L. DeGowin, R. F. Sheets** and **H. E. Hamilton,** of the Department of Internal Medicine at SUI, attended a Washington, D. C., conference on red cell metabolism. Since World War II, the three men have achieved recognition for their work in determining how long blood cells live, both in normal persons and in patients suffering from blood diseases.

Dr. William McAllister has moved his practice from Ida Grove to Manly.

On November 12, **Dr. Sterling A. Barrett,** an EENT specialist, and Miss Pauline Rockufeler, both of Waterloo, were married at Chatfield, Minnesota.

Dr. B. E. Kenney has returned to his practice in Woodbine after serving two years with the Air Force.

Dr. Donald C. Conzett, and **Dr. Henry G. Langworthy,** both of Dubuque, were re-elected to positions on the board of trustees of the Interstate

ANNUAL CLINICAL CONFERENCE

CHICAGO MEDICAL SOCIETY

March 1, 2, 3, 4, 1955

Palmer House, Chicago

DAILY HALF-HOUR LECTURES BY OUTSTANDING TEACHERS AND SPEAKERS on subjects of interest to both general practitioner and specialist.

PANELS ON TIMELY TOPICS.

MEDICAL COLOR TELECASTS.

TEACHING DEMONSTRATIONS.

SCIENTIFIC EXHIBITS worthy of real study and helpful and time-saving TECHNICAL EXHIBITS.

The CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE should be a MUST on the calendar of every physician. Plan now to attend and make your reservation at the Palmer House.

THE RETREAT HOSPITAL

Des Moines, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
MARTIN J. KRAKAUER, Psychologist

PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist

SYDNEY L. MACMULLEN, Administrator

HERBERT W. VETTER, Asst. Administrator

2801 Woodland Ave. **Phone 5-2121**

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.,
4003 11th Street Place,
Telephone 3-3804

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

Postgraduate Medical Association of North America, at the organization's meeting in Minneapolis in November. **Dr. B. T. Whitaker,** of Boone, was elected to his first term on the board.

Dr. George L. Robinson, of Hudson, was admitted to the Iowa City V-A Hospital in mid-November with a severe diabetic condition and complications.

At recent meetings, the Linn County Medical Society gave desk sets to **Drs. Harry J. Jones** and **C. T. Houser** in commemoration of the fifty years that each of them has spent in medical practice. Both are 1904 graduates of the College of Medicine at SUI, and both are Life Members of the Iowa State Medical Society. Dr. Jones has been in Cedar Rapids since he returned from military service at the close of World War I; Dr. Houser has been in Linn County since his entry into practice.

Dr. Mattie Crain, of Deep River, underwent eye surgery at University Hospitals, Iowa City, early in November.

Dr. A. J. Mullmann, of Perry, who had recently returned to practice after recovering from injuries he received in an automobile accident last Christmas time, broke a small bone in his ankle while on a hunting trip November 11.

Dr. W. John Foster has begun the practice of internal medicine at Cedar Rapids. Following his graduation from the SUI College of Medicine in 1947 and an internship in Chicago, he has served two-year residencies in his specialty at the V-A hospital in Houston and at University Hospitals, Iowa City, in between a couple of two-year tours of duty in Navy uniform.

At Amana, **Dr. Harold Moessner** has joined **Dr. C. F. Noe** in general practice. Dr. Moessner graduated from the SUI College of Medicine in 1953, and since then has interned at Youngstown, Ohio.

Dr. N. Boyd Anderson, of Des Moines, was promoted to brigadier general, U. S. Army, Iowa National Guard, retired, on November 20.

Dr. H. Kirby Shiffler has announced the removal of his office from 3200 University Avenue to 1117 Equitable Building, in Des Moines. Dr. Shiffler specializes in gynecology.

Dr. Charles W. Gray, superintendent and medical director of Sunnyslope sanitarium, at Ottumwa, has resigned his position, effective next July, to accept a residency in internal medicine at SUI.

Dr. David A. Freed, a graduate of the medical school at the University of Wisconsin, has entered general practice in West Union, as a staff member of the Medical Clinic.

Early in December, **Dr. George W. Marme** reported for duty with the Air Force. He has been associated in practice at De Witt, during the past five years, with **Dr. L. H. Schafer.**

NATIONAL REGISTRY OF MEDICAL SECRETARIES

Because many Iowa physicians have received advertising from a firm representing itself as "The National Registry of Medical Secretaries, 719 Boylston Street, Boston," the executive secretary of the Iowa State Medical Society asked that the AMA make inquiries about it.

Dr. George F. Lull has relayed the following statement from the Massachusetts State Medical Society:

"We have received many inquiries concerning the National Registry of Medical Secretaries . . . and regret that we have not been able to secure any information which will enable us to attach any kind of label to it. You may, however, be interested in the following information concerning Walter Wollman, M.D., executive secretary of the Registry. Wollman attended the Massachusetts College of Pharmacy between 1925 and 1928, but did not graduate. He graduated from the College of Physicians and Surgeons, Boston, an unrecognized medical school, in 1941. He has failed to pass the examination of the Massachusetts State Board of Registration in Medicine twelve times between 1942-49. He is registered as a physical therapist under date of May 28, 1953, and he has been connected with the Massachusetts School of Physical Therapy, an unapproved school."

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of December 10, 1954

Ackerman, J. H., Clarksville
(Baltimore, Maryland), Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.) .....Lt., U.S.N.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.) .....Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) ..... Capt., A.U.S.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Daut, R. V., Davenport
(Westover Field, Massachusetts) ....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.

DIGITALIS

in its completeness

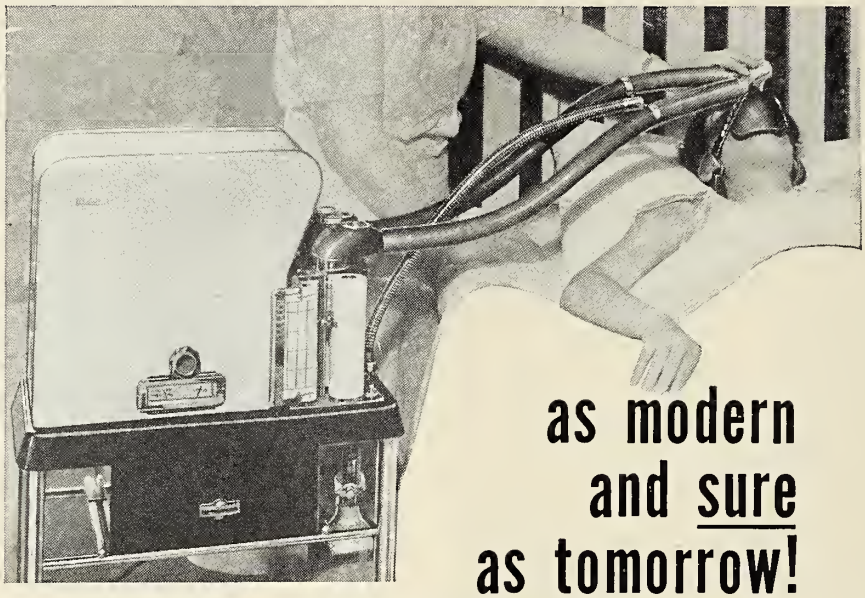


Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Company, Limited
Boston 18, Mass.



as modern and sure as tomorrow!

Leading modern hospitals are choosing McKesson Waterless Metabolism Units.

Because these McKesson Metabolors look as modern as tomorrow—*and are as sure.*

Their operation is as *sure as tomorrow* because of sound basic design and up-to-the minute engineering—like the ample 4½-liter oxygen-capacity, first introduced by McKesson.

Sure also because of the same flawless precision workmanship and manufacture which always have characterized the world-famous McKesson Anesthesia Machines.

- *To be modern and sure, choose McKesson Metabolors.*
- *A Brochure is yours for the asking.*

McKesson

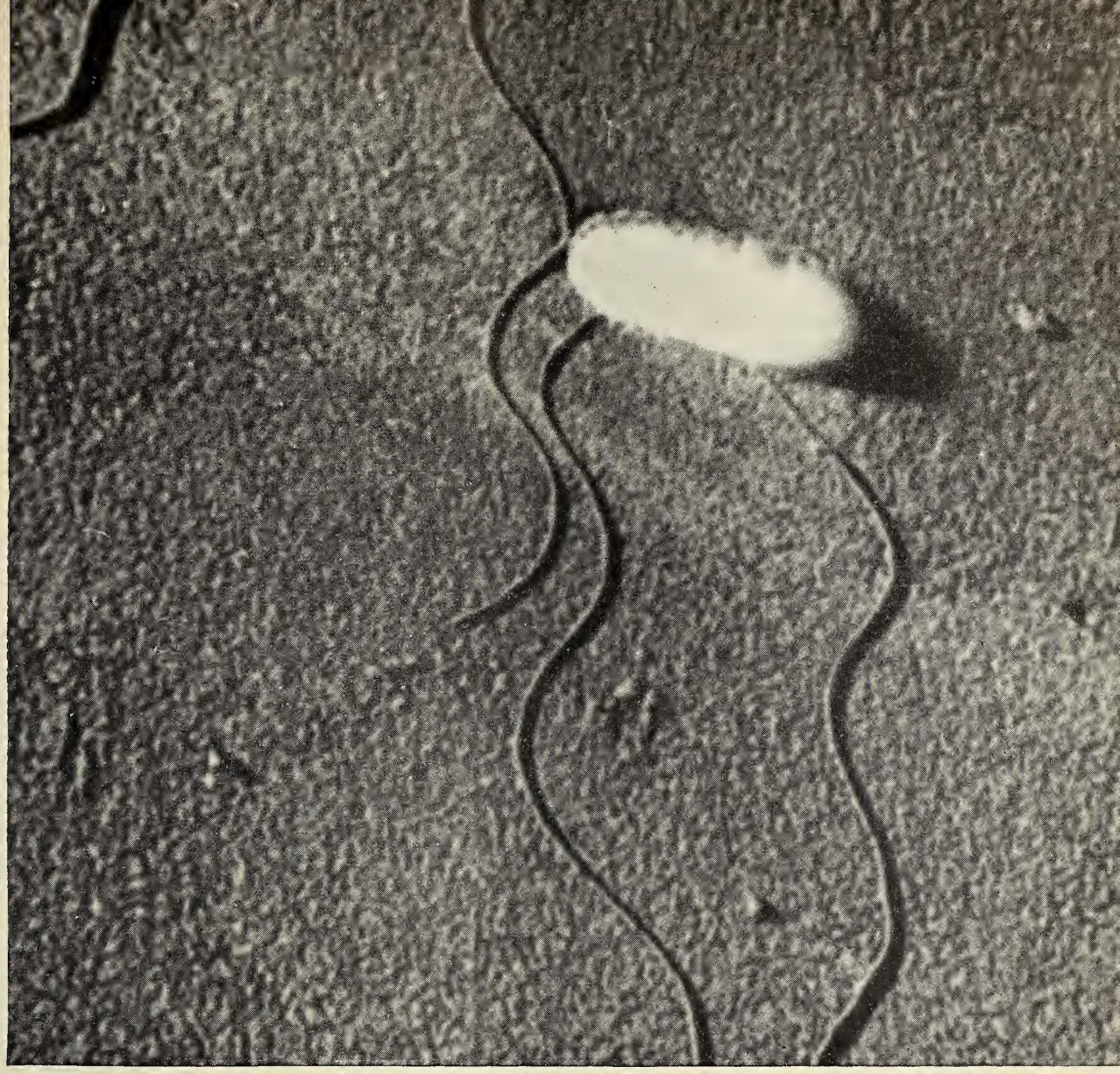
ACCEPTED COUNCIL ON PHYSICAL MEDICINE and REHABILITATION AMERICAN MEDICAL ASSOCIATION

WATERLESS METABOLORS

DISTRIBUTED BY I-155

PHYSICIANS & HOSPITALS SUPPLY CO., Inc.

1400 HARMON PLACE MINNEAPOLIS 3, MINNESOTA



ELECTRON PHOTOMICROGRAPH

Salmonella paratyphi B 32,000 X

Salmonella paratyphi B (Salmonella schottmuelleri) is a

Gram-negative organism which causes

food poisoning • chronic enteritis • septicemia.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Dunseth, W. R., Kellogg
(APO San Francisco, Calif.) .....USAF
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas) .....1st Lt., A.U.S.
Field, C. A., Cresco
(Manhattan, Kans.) .....Capt., A.U.S.
Frys, Russell N., Iowa City .....
Garred, J. L., Whiting
(San Francisco, Calif.) .....Lt., U.S.N.R.
Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) .....Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.
Hanske, Edward A., Des Moines
(Camp Gordon, Georgia) .....Capt. U.S.A.H.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hickman, D. M., Indianola
(Alexandria, Louisiana) ..... 1st Lt., U.S.A.F.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Jenkins, H. F., Ogden
(Randolph A.F.B., Texas) .....U.S.A.F.
Johnson, M. H., Iowa City
(Manchester, Iowa) ..... Maj., A.U.S.
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) .....1st Lt., A.U.S.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.)
Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.
Larson, Gerald E., Elk Horn
(Gunther AFB, Montgomery, Ala.) .....U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Lee, R. W., Burlington.....
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Maxwell, J. R., Iowa City
(Camp Stoneman. California) .....1st. Lt., A.U.S.
Meyer, Paul G., Manchester
(Ft. Sam Houston, Texas) .....Capt., A.U.S.
Middleton, W. H., Central City
(Bethesda, Maryland) .....U.S.N.R.
Montgomery. A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.



THOROUGHBRED IN ITS FIELD

Audivox, successor to Western Electric Hearing Aid Division, brings the boon of better hearing to thousands.

These are the Audivox Hearing Aid Dealers who serve you in IOWA. Audivox dealers are chosen for their competence and their interest in your patients' hearing problems.

HEARING IS THEIR BUSINESS:

CEDAR RAPIDS
PROFESSIONAL HEARING SERVICE
1105 25th St. S. E.
Tel: 2-2483

DAVENPORT
ED. A. MCCLENAHAN HEARING AID SERVICE
404 Union Arcade
Tel: 6-3033

DES MOINES
AUDIVOX HEARING SERVICE
423 West 5th St.
Tel: 3-1471

DUBUQUE
HARTIG DRUG COMPANY
730 Main Street

MASON CITY
DR. JOHN H. LEPPER
513 No. Washington Ave.

McGREGOR
PERKINS HEARING SERVICE

SIOUX CITY
REED AUDIPHONE COMPANY
250 Orpheum Electric Building
Tel: 56412

OMAHA, NEBRASKA
PROFESSIONAL HEARING SERVICE
420 Barker Building
Tel: HA-7849

SIOUX FALLS, SOUTH DAKOTA
ROLAND OPTICAL DISPENSARY
510 National Bank of S. D. Building
Tel: 2-5721

audivox
TRADE-MARK
SUCCESSOR TO
Western Electric
HEARING AID DIVISION

DOCTOR, WHEN YOUR PATIENTS ASK...

What have VICEROYS got that other filter tip cigarettes haven't got?



The Answer Is

20,000 FILTERS

in Every Viceroy Tip

Only Viceroy has this new-type filter. Made of a non-mineral cellulose acetate—it gives the greatest filtering action possible without impairing flavor or impeding the flow of smoke.

Smoke is also filtered through Viceroy's king-size length of rich, costly tobaccos. Thus, Viceroy smokers get *double the filtering action* . . . for only a penny or two more than brands without filters.

WORLD'S LARGEST-SELLING FILTER TIP CIGARETTE

New King-Size

Filter Tip VICEROY

ONLY A PENNY OR TWO MORE THAN CIGARETTES WITHOUT FILTERS



Nielsen, G. E., Des Moines
(APO Seattle, Washington) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Perman, Harvey H., Forest City
(Yokasuka, Japan) .....U.S.N.
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfaff, R. A., Dubuque
(Camp Pendleton, Calif.) ..... Lt., U.S.N.R.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Prendergast, L. J., Iowa City
(Oceanside, California) ..... U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Reading, Donald, Iowa City
(U.S. Army Examining Station, Des Moines) .....
Rhode, M. C., Iowa City
(Philadelphia, Pa.)
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Jamaica, New York) ..... Lt., U.S.N.R.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Colorado Springs, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(Bowling Green, Ky.) .....Capt., A.U.S.
Spohnheimer, L. N., Donnellson
(Mountain Home AFB, Idaho) .....1st Lt., USAF
Stivers, T. W., Des Moines
(Hutchinson, Kansas) .....Lt. (jg) U.S.N.R.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Theilen, E. O., Iowa City
(Washington, D. C.) .....Capt. A.U.S.
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Turner, R. M., Armstrong
(Ft. Sam Houston, Texas) .....A.U.S.
Uchiyama, J. K., Des Moines
(Wichita Falls, Texas) .....Capt., U.S.A.F.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wall, J. M., Boone
(Bryan A.F.B., Texas) ..... 1st Lt., U.S.A.F.
Walston, J. H., Graettinger
(Lackland A.F.B., Texas) .....1st Lt., U.S.A.F.
Wilson, Robert G., Missouri Valley
(Etain, France) .....Flight Surgeon
Witte, H. J., Marathon
(San Francisco, Calif.) .....Lt. Col., A.U.S.
Workman, R. D., Ruthven
(Omaha, Nebr.) .....U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.
Zoeckler, Samuel J., Des Moines
(Ft. Sam Houston, Texas) .....Capt., A.U.S.

Relax the best way ... pause for Coke



Time out for refreshment

DRINK Coca-Cola REG. U.S. PAT. OFF.



CIRCULATION

THE

Journal

OF THE IOWA STATE MEDICAL SOCIETY

CONTENTS

The Causes and Prevention of Postpartum Hemorrhage
A. W. Diddle, M.D., Knoxville, Tennessee 58

Hemorrhage as a Cause of Maternal Death in Iowa
Madelene M. Donnelly, M.D., Des Moines 62

Lesions of the Pancreas of Surgical Interest
James T. Priestley, M.D., Rochester, Minnesota 65

Carcinoma of the Thyroid Gland
Martin A. Blackstone, M.D., Sioux City . 73

Protean Manifestations of Periarteritis Nodosa
Atlee B. Hendricks, M.D., Davenport . 75

State University of Iowa College of Medicine Clinical Pathologic Conference 78

(Continued on page iv)

effective treatment and enticing treat

ILOTYCIN PEDIATRIC

(Erythromycin, Lilly) Ethyl Carbonate

another reason to consider ILOTYCIN FIRST

Lilly

FEBRUARY, 1955

when resistance to other antibiotics develops...



PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

Current reports[1,2] describe the increasing incidence of resistance among many pathogenic strains of microorganisms to some of the antibiotics commonly in use. Because this phenomenon is often less marked following administration of CHLOROMYCETIN (chloramphenicol, Parke-Davis), this notably effective, broad spectrum antibiotic is frequently effective where other antibiotics fail.

Chloromycetin®

Coliform bacilli—100 strains

up to 43% resistant to other antibiotics;
2% resistant to CHLOROMYCETIN.[1]

Staphylococcus aureus—500 strains

up to 73% resistant to other antibiotics;
2.4% resistant to CHLOROMYCETIN.[2]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References

(1) Kirby, W. M. M.; Waddington, W. S., & Doornink, G. M.: Antibiotics Annual, 1953-1954, New York, Medical Encyclopedia, Inc., 1953, p. 285.
(2) Finland, M., & Haight, T. H.: *Arch. Int. Med.* **91**:143, 1953.

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV FEBRUARY, 1955 No. 2

CONTENTS

(Continued from page i)

EDITORIALS

Regional Concept in Continuation Education 85
A Disappointment 85
Changed Procedure in V-D Control . . . 86
A Physician's Supplication 86

SPECIAL DEPARTMENTS

Minutes of State Society Officers and Committees 87
Blue Cross-Blue Shield 88
The Doctor's Business 89
Iowa Academy of General Practice . . . 92
President's Page 94
The Journal Book Shelf 95
Medical History 96
Mental Illness 100
State Department of Health 101
Woman's Auxiliary News 104
County Societies 106
County Medical Society Officers 108
The Month in Washington xviii
Personals xxii
Deaths xxiv
Speakers' Bureau Schedules xxvi
Roster of Iowa Physicians in Military Service . xxvi

MISCELLANEOUS

Postgraduate Courses at Minneapolis . . . 72
Important Request From the AMA . . . 72
Sectional Meeting of ACS in Cleveland . . 74
Don't Rub Snow on Frostbite 84
Forensic Medicine 87
Federal Money for SUI Research Center . . 87
Doctors' Help Is Needed 92
Sioux Valley Meeting at Sioux Falls . . . 93
Heart Conference in Des Moines 93
SUI Postgraduate Courses 93
Community Health Week, March 21-27 . . 93
Remarkable Electron Photomicrographs . . 98
An Open Letter to Mr. Louis B. Blair . . 99
Regional Meetings of the ICS 100
Diseases of the Chest 100
Postgraduate Lecture 100
The Doctor's Duties as a Citizen 103
Kansas Heart Conference 107
California Court Upholds Co-op. xx

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

Everett M. George, M.D., Scientific Editor..Des Moines
Miss Mary L. McCord, Business Manager..Des Moines
Mr. Edward W. Hamilton, Assistant Editor..Des Moines

EDITORIAL BOARD

Eugene J. Boyd, M.D.....Iowa City
Allan G. Felter, M.D.....Van Meter
Daniel A. Glomset, M.D.....Des Moines
Tom D. Throckmorton, M.D.....Des Moines

PUBLICATION COMMITTEE

Wendell L. Downing, M.D., Trustee.....Le Mars
George H. Scanlon, M.D., Trustee.....Iowa City
Fred Sternagel, M.D., Trustee.....West Des Moines
Richard F. Birge, M.D., Secretary.....Des Moines
Everett M. George, M.D., Editor *Ex Officio*, Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



The Causes and Prevention of

Postpartum Hemorrhage

A. W. DIDDLE, M.D.

KNOXVILLE, TENNESSEE

The loss of 500 cc. or more of blood postpartum is defined as a hemorrhage. Patients who lose 1500 to 2000 cc. of blood and remain untreated may not survive. Though the death rate from postpartum hemorrhage is comparatively small, it is now the leading cause of maternal death in the United States.[3]

Frequently, the amount of blood lost during labor and delivery, particularly at section, is underestimated. Excessive loss without prompt, adequate replacement predisposes to infection, thrombophlebitis, renal failure, further bleeding and prolonged convalescence, with accompanying socioeconomic problems. All obstetric practitioners are confronted with this potential complication for each parturient. The outcome for the woman so afflicted rests with intelligent anticipation and handling of the situation. It requires a thorough physiopathologic understanding of certain complications and conditions during labor: (A) uterine atony, (B) retained placental tissue, (C) lacerations of the genital tract, (D) effect of excessive amounts of analgesia and anesthesia, (E) afibrinogenemia, and (F) inversion of the uterus.

UTERINE ATONY

Uterine atony is, primarily, a failure or delay in retraction and, secondarily, a failure of contraction of the uterine muscle. The predisposing factors are exhaustion from prolonged labor, too much sedation or too deep anesthesia, overdistention of the uterus, abruptio placenta, multiparity, poor general condition of the parturient and mismanagement of the third stage.

Bleeding may occur as recurrent gushes or as a continuous slow trickle. The uterus is flabby and tends to remain uncontracted.

Anticipation, probably, is the most important part of treatment in the case of bleeding due to uterine atony. In instances of exhaustion, delivery under regional is to be preferred over delivery under inhalation anesthesia. If there was excessive antepartum bleeding or anemia due to other causes, it is advisable to give blood before an emergency arises. Proper use of oxytocics during labor minimizes or prevents uterine atony. Postpartum hemorrhage from uterine atony is one of the reasons the patient should be observed for bleeding during at least the first hour postpartum.

RETAINED PLACENTAL TISSUE

A retained piece of placenta, with clots deposited about it, may prevent proper retraction of the uterus. Retained cotyledons commonly result from attempts to shorten the third stage of labor. To the contrary, bleeding may be due to incarceration or incomplete separation of the placenta. Bleeding may be acute and must command immediate attention. On the other hand, a retained piece of placenta may become organized and be the source of repeated hemorrhages, from a day to weeks later. Not uncommonly, physicians are misled in the diagnosis and treatment of this complication for the reason that the placenta is believed to have been delivered intact. One cannot always be certain on the basis of a gross examination of the fresh placenta. Under the circumstances described, a curettage should be done.

LACERATIONS OF THE GENITAL TRACT

Lacerations of the genital tract play an important role in postpartum hemorrhage. Serious bleeding may follow tears around the urethra, around the clitoris or into the broad ligament or uterus. Few consequential lacerations of the cervix occur after effacement and complete dilatation. Slowly produced tears into the uterus may not bleed much, but may be the source of trouble in a future labor if there is an extension into the lower uterine segment. Manual dilatation of the cervix is accomplished by tearing, not by stretching it. Precipitous deliveries not uncommonly produce tears. Any operative procedure requiring version and extraction, forceps rotation or midforceps extraction should be followed by intrauterine bimanual examination and visualization of the cervix and vaginal vault.

Many physicians are unaware that the average blood loss from an episiotomy exceeds 250 cc. Prior to delivery and until repair is begun, it is important that one exert pressure on the incised area with a sterile gauze to conserve blood. Retraction of tissue at the ends of incisions during section and episiotomy necessitates correct placement of hemostatic sutures to prevent concealed or delayed postoperative bleeding.

Other than outlet or low forceps and section, there are few operative procedures that are defensible nowadays. When many of the other operations still commonly practiced have been deleted from our armamentarium, hemorrhage from trauma will be reduced appreciably.

EXCESSIVE ANALGESIA AND ANESTHETICS

Excessive amounts of analgesia and anesthetics not uncommonly are the cause for vasodilatation and uterine relaxation. They increase anoxia, retard uterine contractions and increase the need for operative intervention during labor. It has been our observation at the East Tennessee Baptist Hospital, that patients who have been heavily sedated and deeply anesthetized during labor more often have moderate to severe anemia than do those who have received no sedation and anesthesia, or small amounts of sedation and regional or inhalation anesthesia. Presumably, those who have been heavily narcotized bled more than the others described. Thus, the need to individualize the type and quantity of analgesia and anesthesia for each parturient becomes apparent.

AFIBRINOGENEMIA

Afibrinogenemia is produced by a faulty clotting mechanism. There is a reduction in the circulating fibrinogen into a hemorrhagic range. Depletion of fibrinogen precludes intravascular coagulation of the blood. A thromboplastic material derived from uterine contents and introduced into the systemic circulation initiates the tendency to bleeding. The phenomenon may be preceded by abruptio placenta, by long standing, intrauterine fetal death, or by excessive amounts of amniotic fluid forced into the general circulation.

Some degree of afibrinogenemia probably occurs more frequently than is realized, although serious degrees of this disturbance fortunately are uncommon. If the blood is incoagulable, then intractable bleeding may occur, followed by shock and death, unless prompt, energetic treatment is given. Deterioration in the clotting mechanism can be arrested by rupture of the membrane to remove the intrauterine pressure. Once the uterus has been emptied, the coagulating components usually do not decline further. Quick and adequate replacement of blood is mandatory. Otherwise, the clotting mechanism may deteriorate so rapidly that it is difficult or impossible to administer blood fast enough to elevate or maintain the coagulating components to proper levels. Then, the infusion of two to eight grams of fibrinogen in addition to blood is the procedure of choice. During normal pregnancy, eight to twelve grams of fibrinogen, or more than 300 mg. per cent, is found in the circulating blood. Only 5 to 10 mg. per cent of fibrinogen are contained in 500 cc. of fresh transfused blood.[4]

INVERSION OF THE UTERUS

Inversion of the uterus is rare and is mentioned here only for the sake of completeness. It usually is produced by the obstetrician's pushing too hard on the fundus of the uterus or pulling too hard on the umbilical cord to extract the placenta.

Treatment, initially, is directed toward overcoming shock and bleeding. Then, if possible, the uterus is replaced manually. If impossible at that time, the replacement can be delayed for a considerable period of time—from days to weeks. Under this circumstance, resort to surgery is usually necessary.

COMMENT

In the last quarter century, and particularly since blood banks were established, the general maternal mortality rate in this country has decreased considerably. For instance, in Cook County, Illinois, the number of maternal deaths attributed to hemorrhage decreased nearly a half after blood banks were set up there.[5] Sepsis and toxemia—two of the three principal causes of maternal death—are no longer the problem they once were. On the contrary, though less than heretofore, mortality from hemorrhage has not lessened so rapidly as have the other two. Hemorrhage is seldom a cause of death in well organized institutions that are adequately staffed. But it occurs too often in the small, unorganized and understaffed small hospital or clinic. For instance, there were no deaths from hemorrhage among many thousands of deliveries performed in the

Oxford Hospitals, in England, from 1940 to 1950. There was only one among the first 46,000 deliveries at Margaret Hague Hospital after May, 1945.[2] In contrast, the rate in the Knoxville, Tennessee, area, which is considered to be an average urban community in the United States, ranged from one per 2000 to one per 6000 in the various civilian hospitals between 1948 and 1953.

As previously mentioned, anticipation is probably the most important facet in the treatment of postpartum hemorrhage. Every pregnant patient bleeds before delivery is completed. Each is a candidate for hemorrhage. Normally, the bleeding is physiologic in duration and quantity. On the other hand, bleeding from ectopic gestation, abortion, abruptio placenta and previa may reach alarming porportions and be antecedent to what eventually proves to be a postpartum hemorrhage. In the face of these complications, anemia or other concurrent debilitating diseases, physiologic amounts of bleeding may become pathologic. Also, some of the postpartum complications already described may be precipitated.

Anticipation begins with the first prenatal visit. Ideally, the patient then has her blood typed and her Rh factor determined. History and previous blood transfusions and blood dyscrasias are analyzed. Appropriate treatment is given for any existing anemia. The hospital or community should have available blood at all hours for administration in case of emergency. If personnel is unavailable to type or cross match the patient for transfusion, then the physician must assume the responsibility.

During the prenatal course, certain phenomena should alert the physician to potential complications. Toxemia sometimes is complicated by premature separation of the placenta. Dystocia commonly requires operative intervention.

During labor, someone should attend the patient constantly, and sufficient help should be available to cope with any emergency. Hasty intervention during labor, particularly in the second stage, may invite bleeding. There is no place for high forceps application, and seldom for mid-forceps. If operative intervention is necessary, it should be gentle and unhurried, even in the presence of fetal distress. If cephalopelvic disproportion has been demonstrated and if it is evident that vaginal delivery probably will effect trauma to the baby and to the mother, then careful consideration should be given to delivery through the abdomen. Oxytocics are used only in physiologic doses and judiciously. If the patient goes into labor with a hemoglobin below ten grams, blood should be administered.

My handling of the third stage consists of giving 0.2 mg. of ergonovine intravenously with the birth of the baby's shoulders; in any other than a vertex presentation, the oxytocic is delayed until the fourth phase. After injection of the oxytocic, extraction of the baby is carried out slowly, in order that the uterus may adjust to its diminished volume and shear the placenta loose. As soon as the baby has been delivered, one should grasp, but not squeeze, the fundus of the uterus with one hand to ascertain the presence or absence of the normal signs of placental separation, the elevation of the uterus, the globular shape of the uterus, the extrusion of the cord and the gush of blood from the vagina, and to determine whether or not elevation of the uterus from the pelvis retracts the cord into the vagina. Sometimes the placenta is expulsed spontaneously. If its expulsion cannot be gently effected in 25 to 30 minutes, it is removed manually. The patient is never sent to her room until the placenta has been removed.

It is important to measure or estimate the blood loss. In our hospital, there are vessels available for measuring blood loss. In addition, the amount of blood that has been absorbed by the various types of sponges and towels used in the delivery is recorded on the bulletin board to help in the estimation.

Bleeding that has been due to lacerations or retained placenta and that cannot be controlled by the usual means may require organized thinking. Personally, I oppose packing, for I think there are better ways to control it. If bimanual control—with one hand in the uterus and the other grasping the fundus abdominally—is ineffective, then blood transfusion, administration of fibrinogen and surgical treatment are to be considered, in order or as a combination. If surgery must be used, however, it is not begun until blood is going intravenously.

CONCLUSION

It is apparent that maternal deaths from postpartum hemorrhage should become practically nil. The accomplishment of that objective requires eternal vigilance by the obstetrician and requires organization within the hospital and community to provide adequate and prompt care for hemorrhagic emergencies. Minimally, each delivery room should have available a sterile vaginal and abdominal laparotomy pack, at least two grams of fibrinogen and a supply of type O Rh-negative blood. Finally, it must be emphasized that to run a considerably understaffed obstetric service is to court trouble.

REFERENCES

1. Beecham, C. T.: Analysis of deaths from postpartum hemorrhage. Am. J. Obst. & Gynec., **53**:442-452, (Mar.) 1947.

2. Cosgrove, S. A.: Overcoming hemorrhagic puerperal mortality. J. Mich. State Med. Soc., **50**:37-40, 53, (Jan.) 1951.

3. Gordon, C. A.: Immediate treatment of obstetric hemorrhage and shock. Am. J. Obst. & Gynec., **41**:1056-1060, (June) 1941.

4. Reid, D. E., Weiner, A. E., and Roby, C. C.: I. Intravascular clotting and afibrinogenemia, the presumptive lethal factors in the syndrome of amniotic fluid embolism. Am. J. Obst. & Gynec., **66**:465-474, (Sept.) 1953.

5. Webster, A.: Symposium on gynecology and obstetrics; use of whole blood in obstetric hemorrhage. S. Clin. North America, **30**:191-201, (Feb.) 1950.

Hemorrhage as a Cause of Maternal Death in Iowa

MADELENE M. DONNELLY, M.D.

DES MOINES

The position of hemorrhage as a major cause of maternal mortality in Iowa has been established by our studies of maternal deaths. There has been a marked reduction in the total of maternal deaths, due to many factors such as improved prenatal care, specific means of treating infection, hospital deliveries and the increased use and availability of blood. But though death from infection and toxemias have been reduced, deaths associated with hemorrhage, of which many are preventable, have shown no such reduction. The progress of medical science and of obstetrical technic has so lowered all maternal death rates, that we have been overlooking this one preventable cause of death.

STATISTICS

Let us briefly review the picture of maternal mortality in our state over the last 40 years. The first chart (Fig. 1) shows the steady increase of

NUMBER AND RATE OF LIVE BIRTHS BY OCCURRENCE, 1910-1952

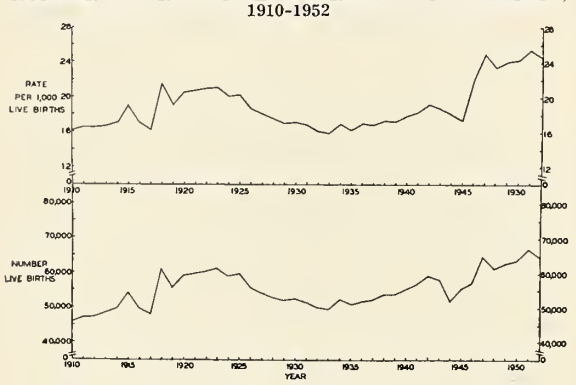


Figure 1

births since 1910. You will note the sharp rises during World War I and World War II, and again in 1951. The second chart (Fig. 2) pictures the maternal death rate during this same period. From 1910 until 1935, there was not much change in maternal death rates. Out of every 1,000 women delivered, four to six mothers died during this period. Since 1935, there has been a sharp decrease in maternal death rates, and since 1947, less than one death has occurred for every 1,000 live births. We feel sure that there were many more maternal deaths than are reported on these charts. During this period, statistics were gathered only from death certificates. Since we began reviewing maternal deaths, we have found that a

NUMBER AND RATE OF TOTAL MATERNAL DEATHS BY OCCURRENCE, 1910-1952

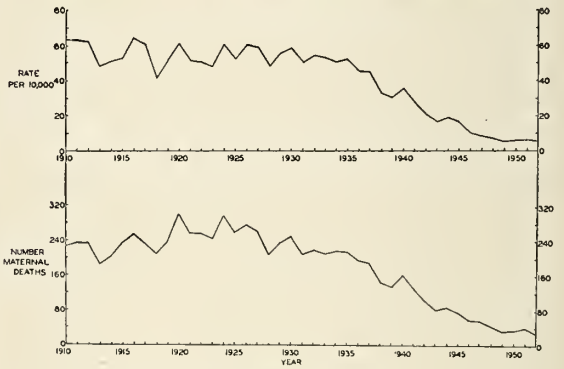


Figure 2

number of death certificates give no intimation that there was a pregnancy in relation to the death. For example, the death certificate of the patient who dies of so-called "pulmonary embolism" goes through the coding section as a cardiac death, unless information appears on the certificate that the woman had been recently delivered.

The next chart (Fig. 3) shows the relationship of the total death rate to the rate of deaths caused by obstetrical hemorrhage. Deaths from hemorrhage have not shown a dramatic reduction.

RATE OF TOTAL MATERNAL DEATHS AND MATERNAL DEATHS DUE TO HEMORRHAGE BY OCCURRENCE, 1935-1952

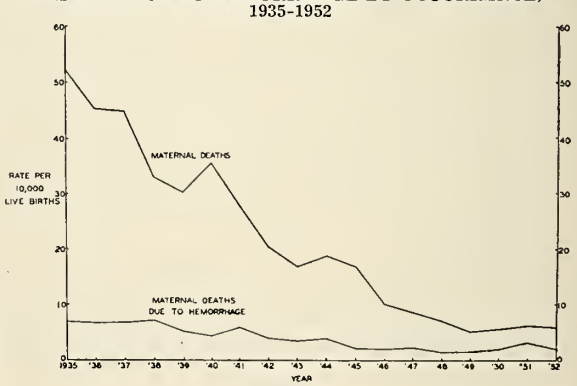


Figure 3

Dr. Donnelly is director of the Division of Maternal and Child Health, of the Iowa State Department of Health.

As a matter of fact, the percentage of deaths associated with hemorrhage has been steadily increasing as infection has been controlled. This picture is demonstrated by Fig. 4.

In 1952, there were 26 maternal deaths. Twelve, or 46.2 per cent, of those were due to hemorrhage (Table 1). Tables 2, 3, 4 and 5 present a breakdown of them. For the most part, those mothers who died of hemorrhage had better prenatal care than did those who died from other causes. Most of those mothers were between 25 and 39 years of age, and more than half of them had had three or more children.

TABLE 1
CAUSE OF MATERNAL DEATH IN IOWA
1952

Cause	Number	Per Cent
Hemorrhage	12	46.2
Toxemia	6	23.1
Cardiac Disease and Embolic Accident	6	23.1
Anesthesia	2	7.6
Total	26	100.0

TABLE 2
PRENATAL CARE
IOWA MATERNAL DEATHS—1952

Cause of Death	No. of Cases	Patients Having Adequate Prenatal Care	
		NO.	PER CENT
Hemorrhage	12	7	75.0
Toxemia	6	2	33.3
Cardiac Disease and Embolic Accident	6	4	66.6
Anesthesia	2	0	00.0
Total	26	13	50.0

Five delivered spontaneously, and four by forceps. One was delivered by section, and two had abortions. Of the ten women who delivered, eight had live-born babies, and two had babies who were stillborn.

More complete histories of the cases have appeared in the annual report of the maternal death study,* but let us briefly review these twelve deaths. The first two cases were incomplete abortions. One refused hospitalization until a few minutes before death, and the doctor was unable either to examine or to treat her adequately. Another patient went into a hospital after having bled for several days, and lived for more than 48 hours. During this time, she had inadequate amounts of antibiotics, no inspection of the uterine cavity and no blood transfusion. The third hemorrhage patient was largely responsible for her own death, in that she deliberately delayed calling the doctor and delivered at home, unattended. On the fifth day, while at stool, she began to hemorrhage and suffered an acute inversion of the uterus. She was in a precarious condition when she arrived at the hospital. Blood was started, and surgery was done immediately. It was felt that surgery should have been delayed until the shock had been completely treated.

The fourth patient went into shock a few hours after an elective cesarean. Although she showed

* Donnelly, M. M.: Iowa Maternal Mortality Study for 1952, J. Iowa M. Soc., 44:244-251, (June) 1954.

TABLE 4
PARITY OF MOTHERS
IOWA MATERNAL DEATHS—1952

	Parity			
	0	1	2	3 or more
Number	6	5	3	12
Mat. Death Rate/1000 L.B.	3.6	2.6	2.2	7.9
Hemorrhage	2	1	2	7
Toxemia	3	2	0	1
Cardiac Disease and Embolic Accident	1	2	0	3
Anesthesia	0	0	1	1

TABLE 5
TYPE DELIVERY AND FETAL SALVAGE
IOWA MATERNAL DEATHS—1952

	Cause of Death				
	Hem.	Tox.	Cardiac Dis. and Embolic Accident	Anes.	Total
Type of Delivery					
Spontaneous 5	2		3		10
Forceps 4	2		2		8
Section 1					2
Post Mortem Section 1				1	2
Abortion 2					2
No Delivery			1	1	2
Fetus					
Live Born 8	2		4		14
Stillborn 2	4		1	1	8
No Product 2			1	1	4

TABLE 3
AGE OF MOTHERS
IOWA MATERNAL DEATHS—1952

Age Group	Mothers	Maternal Death Rate/1000 L.B.	Hem.	Tox.	Cardiac Dis. and Embolic Accident	Anes.
—20 years	0	0	0	0	0	0
20—24 years	5	2.3	1	1	3	0
25—29 years	7	3.8	4	2	1	0
30—34 years	5	4.3	2	1	0	2
35—39 years	6	11.1	4	0	2	0
40 and Over	3	19.9	1	2	0	0
Total	26	4.0	12	6	6	2

UNIVERSITY OF MARYLAND
LIBRARY
Founded 1813

definite signs and symptoms of blood loss, no exploration was done, and she received no blood. The remaining eight delivered from below. Only two of these eight patients had a complete exploration of the uterine cavity and birth canal to rule out uterine rupture or lacerations. One had an inspection of the cervix, but the cavity of the uterus was not examined. Five had no inspection of the birth canal. Four of these eight had blood replacement. One had a small amount of glucose and plasma, but no blood. The remaining three were given nothing to replace blood. In summary, only two of these twelve patients had complete inspection of the birth canal and blood replacement. Three had some blood replacement. The remaining seven did not have adequate treatment. This lack of adequate treatment was in some instances the responsibility of the patient because of her failure to cooperate.

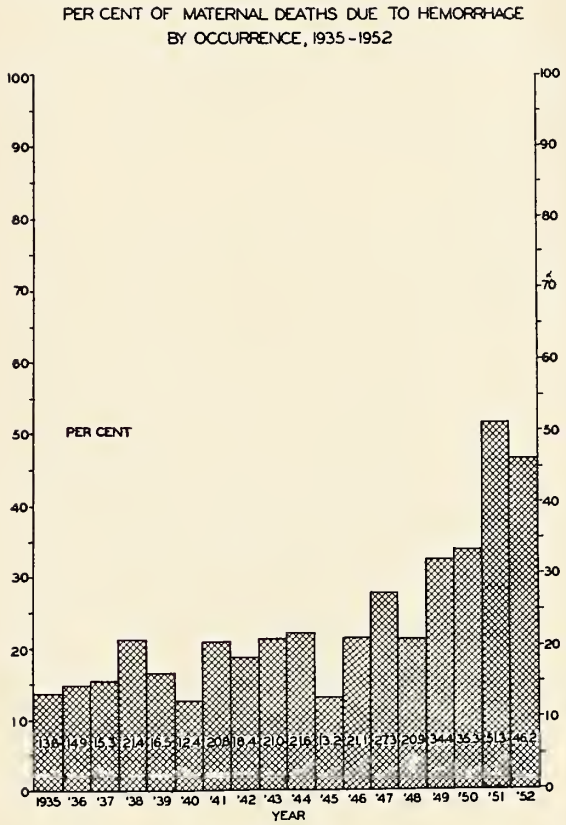


Figure 4

NECESSITY OF BLOOD REPLACEMENT

Recognizing that one of the chief faults in the treatment of obstetrical hemorrhage lies in the failure to replace blood, we sent out a query to 153 hospitals, asking how they obtained their supplies of blood. One hundred thirty-three, or 87 per cent, answered. Thirty-eight of those hospitals maintain a blood bank, 21 use a central blood-bank facility, and 70 depend on donor lists. Two hospitals get all their blood from other hospitals in the town, and two have no arrangements for obtaining blood. Some of the hospitals that have their own blood banks also use central facilities, and a number of them who have access to blood banks also maintain their own donor lists.

There was a definite pattern, as seen in Table 6, which varied according to the size of the obstetrical service. Most of the hospitals maintaining donor lists have their donors typed, and all but two have facilities for cross-matching. Replies from those two stated that they use their donor lists and have no trouble. One hundred fourteen of the hospitals stated that they had no difficulty in getting blood. Four said they have trouble occasionally, and 15 admitted being handicapped. The problems in getting blood were, mainly, in the securing of rare types or large amounts. Some hospitals felt there was too much work involved in keeping a donor list, and several felt that the public did not realize the importance of prompt response to emergency calls for blood.

RECOMMENDATIONS

To sum up the situation, we must admit that the greatest and most easily preventable cause of maternal deaths in Iowa is hemorrhage.

The indicated course of action consists of four parts. *First, blood loss must be accurately estimated.* Unless there is some method established in every delivery room for the accurate estimation of blood loss, cases will occur in which an important loss of blood is unrecognized. *Second, blood must be replaced.* When blood has been lost, it must be replaced with blood. Other fluids can never replace blood, and they may be used only temporarily, until blood can be obtained. *Third, the lesion that is responsible for the hemorrhage must be found.* The source must be determined by inspection and palpation of the birth canal, and if blood is coming from the uterus, its cavity must be examined at once. It must be remembered that

TABLE 6

METHODS USED FOR OBTAINING BLOOD IN IOWA HOSPITALS

1952

Number Deliveries Annually	*Less than 100*	*100-249*	*250-499*	*500-999*	*1000 and over*	*Total*
Number Hospitals Reporting	12	40	44	23	14	133
Blood Bank	1	6	9	11	11	38
Central Facility	1	3	9	5	3	21
Donor List	7	31	25	7		70
Other	1		1			2
No Plans	2					2

the mechanics of certain types of deliveries predispose to uterine rupture. If the uterus is ruptured, the patient will have a good chance of survival with hysterectomy and immediate blood replacement. *Fourth, adequate supplies of blood must be kept available.* If a hospital doing obstetrics and surgery must depend upon donor lists, it must take extra care to educate the public to the part it plays in supplying blood in the amounts needed for immediate use.

Lesions of the Pancreas of Surgical Interest

JAMES T. PRIESTLEY, M.D.

ROCHESTER, MINNESOTA

Not very many years ago, the surgeon seldom operated primarily for a lesion of the pancreas, except to relieve obstructive jaundice caused by a carcinoma which arose in the head of this gland. Today, various lesions of the pancreas are recognized clinically with increasing frequency, and as a result, surgical treatment of certain pancreatic lesions is undertaken more often. This growing surgical experience has answered some questions, but many more remain to be answered. The remarks that I shall make here cannot include a complete discussion of all pancreatic lesions, and accordingly they will be limited to a brief consideration of some of the more common ones, namely pancreatitis, pancreatic cysts, carcinoma and tumors of the islets of Langerhans.

PANCREATITIS

Acute pancreatitis is commonly divided into two types: acute interstitial or edematous pancreatitis, and acute pancreatic necrosis. Various terms have been used to indicate these conditions, particularly the latter one, which has also been called "acute hemorrhagic pancreatitis" or "acute hemorrhagic necrosis of the pancreas." Many think that these are actually different stages or degrees of the same process. Peripancreatic abscess is a complication which may follow an attack of acute pancreatitis and may require incision and drainage.

The onset of acute pancreatitis is usually rather abrupt and is characterized by severe pain in the upper part of the abdomen, frequently extending through into the back. Pain persists for a number of hours or days, and is inadequately relieved by one or two doses of morphine. As a rule, nausea and vomiting occur promptly. Findings, which may be meager on initial physical examination, include normal or subnormal temperature, low pulse rate and normal blood pressure. Abdominal tenderness is moderate. Later in the disease, epigastric tenderness is increased and is associated with varying degrees of abdominal rigidity. Distention frequently develops, and shock may supervene. Helpful laboratory findings, consisting of elevation of the values for serum lipase and amylase, are noted in almost all cases, but these changes have been noted occasionally after acute perforation of a duodenal ulcer and also in association with a few less-common conditions.

Whereas the treatment of acute pancreatitis formerly was considered surgical, most physicians and surgeons now agree that treatment should be medical. Some have suggested that early drainage of the common duct might abort a severe attack of pancreatitis, but little actual experience has been reported with that procedure. Bilateral splanchnic block with procaine, perhaps repeated on several occasions, may not only relieve pain but perhaps may produce other beneficial effects. Medical measures are directed toward general support, relief of pain, treatment for shock if present, reduction of pancreatic secretion and prevention of secondary infection. Commonly, the therapy includes rest in bed, nothing by mouth, intravenous administration of appropriate fluids, use of an indwelling gastric tube, continued and repeated administration of small doses of methantheline (Banthine), adequate sedation and use of antibiotics.

Chronic recurring or relapsing pancreatitis is a clinical entity characterized by recurring episodes of severe pain in the upper part of the abdomen. These painful attacks are of variable frequency, severity and duration. Whereas early in the course of the disease the attacks may occur only once or twice a year, their frequency usually increases as the disease progresses, and they may occur several times a week or even oftener. The pain is usually situated in the upper half of the abdomen, sometimes more on one side than on the other, and it is almost always referred into the back.

Dr. Priestley is a member of the staff in surgery at the Mayo Clinic and Mayo Foundation, the latter of which is a part of the Graduate School of the University of Minnesota.

Although attacks may last only a few hours, they commonly persist for at least 10 hours and may continue for days or for several weeks. Repeated doses of narcotics usually are required. Common associated symptoms include nausea, vomiting, gaseous distention and abdominal tenderness. More or less nondescript gastrointestinal symptoms may be present during the intervals between attacks, or the patient may be relatively free of symptoms at those times. Significant disease of the biliary tract is present in approximately half of the patients who have relapsing pancreatitis.[1]

Physical findings are similar in type to those found in cases of acute pancreatitis, but are less pronounced. At times, an enlarged pancreas is palpable. Elevated values for serum amylase and lipase usually are noted early in an attack. The value for serum amylase tends to return to normal within one to four days after the cessation of pain, whereas the value for serum lipase may remain elevated somewhat longer. An extremely low value for serum calcium during an attack often indicates a serious prognosis. Other chemical abnormalities of the blood may be noted as the result of vomiting.

There are various complications which may alter the clinical picture of the disease. Jaundice may result from pressure on the common bile duct exerted by the enlarged, indurated pancreas, or from the obstruction of the common duct by a stone. If extensive damage to the pancreatic parenchyma has occurred, there may be evidence of either external or internal pancreatic insufficiency, or of both of them. A pseudocyst may become palpable during an acute attack, but then subside. Ulceration into the stomach, duodenum or colon has been observed secondary to an acute attack of pancreatitis, and bleeding into the gastrointestinal tract may occur.

Advanced chronic pancreatitis may result from repeatedly recurring attacks of acute or subacute pancreatitis. This condition is characterized by more or less constant pain, perhaps associated, in addition, with attacks of more severe pain. As a result of the recurring episodes of pancreatitis, the pancreas may become almost completely destroyed, and an insufficiency of both the internal and the external pancreatic function supervenes, with the occurrence of diabetes and steatorrhea. There may be roentgenologic evidence of calcification, either in some areas of the pancreas or diffusely throughout the entire gland. Stones may be found in the pancreatic ducts. The patient with this condition is indeed miserable. He loses weight and strength, and frequently becomes addicted to drugs, if they are given him regularly in an effort to relieve his constant pain.

Even though the exact cause of acute recurring pancreatitis is somewhat uncertain, some etiologic relationships have been noted. Experimental injection of bile into the pancreatic ducts of dogs is usually followed by the development of acute pancreatitis, and it is thought that this mechanism may be responsible for the development of acute pancreatitis in man. The entrance of bile into the pancreatic ducts may result from obstruction in the region of the ampulla of Vater. It is also thought that obstruction which arises within the distal end of the pancreatic duct may likewise be responsible for the development of acute or recurring pancreatitis. Clinically, it has been observed on numerous occasions that patients who have recurring pancreatitis give a history of excessive use of alcohol. Trauma, unusual physical exertion and infection have been suggested as having etiologic significance, but it seems doubtful that these factors are frequently of importance.

The treatment of chronic relapsing pancreatitis is both medical and surgical. Treatment during acute attacks has been mentioned previously. Although there may be no medical measures which will prevent recurrent attacks of acute pancreatitis, abstinence from alcohol, avoidance of overeating, and the maintenance of a low-fat diet may be helpful. Oftentimes, pancreatin is helpful in the treatment of external pancreatic insufficiency, if that complication is present.

At times, the surgical treatment of recurring pancreatitis may be spectacular and gratifying, but unfortunately not always so. Some patients may be relieved only partially or temporarily, and it is difficult to predict accurately the result which will be obtained in a given patient.

Many different surgical procedures have been tried for the prevention of recurring pancreatitis. These include cholecystectomy, cholecystostomy, vagotomy, gastric resection and dilatation of the sphincter of Oddi. Current surgical therapy is based on the premise that recurrent attacks are caused either by obstruction of the pancreatic duct or by a reflux of bile into the pancreatic ducts, produced by obstruction in the region of the sphincter of Oddi.

It is my practice at this time to correct any disease within the biliary tract and then to establish prolonged surgical biliary drainage. Until the last several years, this was accomplished usually either by insertion of a T-tube into the common bile duct for prolonged (at least six months) external biliary drainage, or by a side-tracking operation such as choledochoduodenostomy. During the last several years, transduodenal sphincterotomy has been frequently employed. This may be accomplished in one of several ways. It has been my practice to expose the sphincter of Oddi through a relatively small longitudinal incision in the duodenum, which is subsequently closed in the transverse direction. An incision is made in the anterior wall of the sphincter of Oddi for the distance of approximately three quarters of a centimeter. A long-linked T-tube is then passed into the duodenum from an opening above in the common bile duct. This tube is permitted to remain in

place for approximately three months. In some cases of severe recurring pancreatitis, drainage operations such as those I have mentioned may not afford lasting relief, and resection of the head of the pancreas may be indicated.

As the clinical picture changes from one primarily characterized by repeated severe attacks to one characterized mainly by constant pain, it is thought that the syndrome should then be diagnosed as advanced chronic pancreatitis, rather than recurring pancreatitis. Under these circumstances, the pancreas usually has been largely destroyed, from a functional point of view, and evidences extensive calcareous deposits (Figure 1). The main indication is for relief of pain, rather than for prevention of acute attacks and preservation of pancreatic function. In such cases, bilateral splanchnic block with procaine may be tried, and if it is followed by relief of pain, bilateral splanchnic resection may be performed. At times, such a procedure is followed by a favorable result, but often pain recurs. Partial pancreatectomy, with

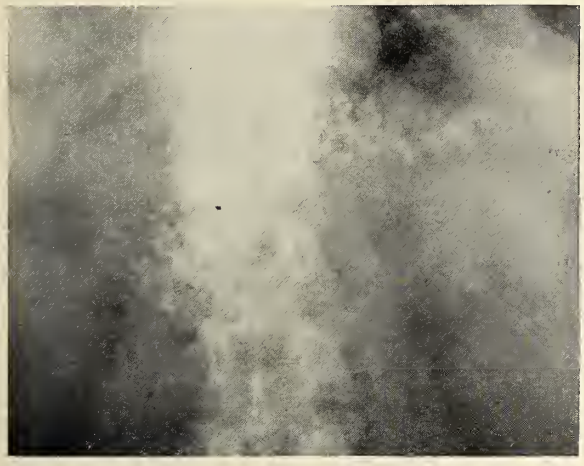


Figure 1. Advanced chronic pancreatitis. Plain roentgenogram reveals extensive calcification throughout the pancreas.

removal of the head of the gland, may be employed in some cases. Total pancreatectomy has been performed, but it is not often recommended.

CYSTS

Numerous classifications of pancreatic cysts are to be found in the literature. The abbreviated classification which follows seems satisfactory from a practical point of view: pseudocysts, retention cysts, neoplastic cysts, congenital cysts, parasitic cysts and miscellaneous cysts.

Pseudocysts, the commonest type of all, are not true cysts, for they have no epithelial lining. They are collections of more or less fluid material, usually adjacent to—but occasionally within—the pancreas, and surrounded by a wall of fibrous tissue. One of them may develop in association with any part of the pancreas, and therefore may be situated to the left or right of the midline and

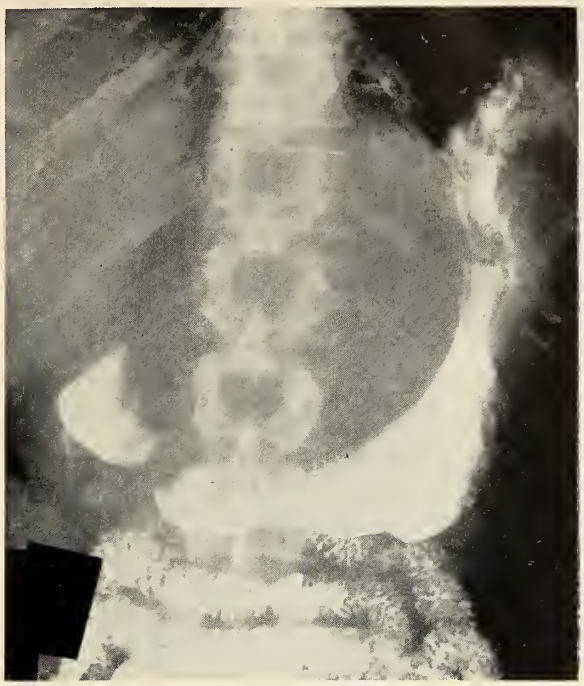


Figure 2. Pseudocyst of the pancreas which presents above the stomach. Roentgenogram after ingestion of barium reveals downward and lateral displacement of stomach.

either above or below the stomach or duodenum (Figure 2). Occasionally, such a cyst presents itself by pressing forward through the transverse mesocolon or in some other unusual site. These cysts vary in diameter from several to 30 cm. or more. Pancreatic enzymes, in variable amounts, may be present in the contents of a pseudocyst, or they may be absent.

Pancreatitis is the most common etiologic factor in the development of a pseudocyst. If trauma is the causative factor, it is more often blunt and crushing, rather than perforating in type. Although it is thought that formation of the cyst commonly occurs in association with an acute inflammatory process in the pancreas, the surgeon may find only chronic changes in the pancreas at the time of operation. In some cases, there appears to be no factor of etiologic significance.

In past years, a correct *preoperative diagnosis of pseudocyst* has been made in a relatively small proportion of cases. It would seem that with a clear appreciation of the cause and clinical picture of this lesion and careful study of the patient, a higher degree of accuracy in diagnosis could be established.

Pain is by far the most common symptom of pseudocyst, and it is present in 85 per cent of cases. In many instances, pancreatitis, which is frequently the precursor of, and is associated with, the cyst, may be responsible for a major portion of the pain. Consequently, the pattern, type and extension of the pain may conform closely to those found in cases of recurring pancreatitis. Pain may occur in any part of the upper half of the

abdomen, but frequently it is on the left side and referred to the back.

Physical examination generally reveals recent loss of weight. Jaundice is present in a little less than a third of the cases and depends for its occurrence on the site of the cyst, the type and amount of pancreatitis present, and associated calculous disease of the biliary tract. By far the most striking finding on physical examination is a mass in the upper part of the abdomen. It is present in approximately four fifths of the cases and would probably be found in an even larger share except that some of these cysts are relatively small. The physical characteristics of the mass vary. Generally, it is rounded, slightly tender, relatively immobile and fairly firm. At times, indeed, it may be so firm and fixed that it is mistaken for a neoplasm. In about half the cases, the mass is situated primarily to the left of the midline.

A plain roentgenogram of the abdomen may reveal a large soft-tissue shadow, and roentgenologic study of the stomach and duodenum following ingestion of barium may show evidence of displacement of the stomach in one way or another, or it may show a widening of the normal duodenal loop, as visualized roentgenographically.

Surgical treatment of a pseudocyst of the pancreas may vary, depending on the size, situation and physical characteristics of the cyst. In the past, the most frequently employed treatment has been marsupialization and drainage. This is a relatively simple and safe procedure, and it will give good results if drainage is maintained until the cyst cavity has been completely obliterated and all drainage of pancreatic juice—if any has existed—has ceased. The main disadvantage of this type of treatment is the inconvenience that prolonged external drainage causes the patient. During the last few years, internal drainage of a pancreatic pseudocyst has received renewed attention,[2, 3] and there is increasing use of that procedure. Such a cyst may at times be anastomosed with the posterior wall of the stomach or, by a Roux-Y loop, with the jejunum. My personal experience with these procedures has been limited, but favorable results are reported in the literature.

Because of the absence of a true cyst wall and the dense adherence of the cyst to all surrounding structures, total excision is seldom undertaken as less extensive procedures are followed by good results in a large percentage of cases.

Retention cysts of the pancreas, as their name implies, are ones which contain the products of external pancreatic secretion. Each of them has a true cyst wall, which is found to be lined with epithelium except in the rare case where it has been almost completely obliterated by long-standing and increasing pressure within the cyst cavity. It is thought that a cyst of this type may arise as the result of any cause which leads to persistent partial obstruction of the free drainage of external pancreatic secretion from a significant portion of the pancreas. Although there are distinct physiologic and pathologic differences between a pseudocyst and a retention cyst, these are the two types of pancreatic cysts which are most likely to be confused at the time of operation. Trauma is perhaps the most frequent cause of a retention cyst, but a stone or inflammation may be a causative factor.

Neoplastic Cysts. Various other types of cystic lesions may occur in the pancreas, but they are encountered rather infrequently. Probably the most common is the benign cystadenoma. Neoplastic cysts commonly produce a palpable tumor, symptoms of pressure, pain, loss of weight and gastrointestinal symptoms. These cysts may occur in any part of the pancreas, but are more commonly found in the body or tail. As is true of other pancreatic cysts, they are situated above or below the stomach or in other areas, depending on the site of development in the pancreas and on the size of the cysts. They may be small or large. Usually, they are of considerable size before attention is directed to their existence.

Pathologically, these cysts may vary from a thin-walled, unilocular structure to a spongy, thick-walled, multilocular lesion, with a honeycombed appearance on the interior. They may be multiple, but usually are single. The lining epithelium may be columnar, cuboidal or mucus-producing, resembling that of intestines. The contents are frequently stained with old blood, but may be clear. Surgical removal is the treatment of choice.

Cystadenocarcinoma is also found in the pancreas. Symptoms are similar to those of cystadenoma, but usually become more pronounced. In fact, cystadenocarcinoma is similar in most ways to benign cystadenoma except for the difference in the pathologic picture. Pathologically, malignant cystadenoma may vary in appearance. It may be partially solid. It usually has a thick wall in most portions, and papillary and sessile projections of malignant tissue extend into the interior of the cyst. Histologically, cystadenocarcinoma commonly is of low-grade malignancy. Usually, the malignant process remains intracystic and shows little tendency to invade adjacent structures. The preferred treatment is complete surgical removal.

Other neoplastic cysts which are rarely encountered include sarcomatous and teratomatous cysts. At times, there may be cystic degeneration of an ordinary carcinoma of the pancreas.

Congenital Cysts. Some cysts of the pancreas, seldom encountered, are considered to be the result of abnormal development. Some of these have been observed in infants. Multiple cysts have been reported and termed "dysontogenetic cysts" to indicate their origin. Polycystic disease, which involves the pancreas and is associated with cysts

in the liver, central nervous system, retina and elsewhere, constitutes what is known as von Hippel-Lindau disease. Dermoid cysts are extremely rare. Cystic fibrosis of the pancreas, first described in 1938, has been recognized more often in recent years and generally is found in infants, though it may occur later in life. It sometimes is associated with intestinal obstruction and meconium ileus.

Parasitic cysts of the pancreas are extremely uncommon in this country, but hydatid cysts have been reported.

CARCINOMA

The term "carcinoma of the pancreas" commonly refers to a neoplasm which arises from the acinar elements of the gland, or occasionally from the ducts. Tumors of the islets of Langerhans are definitely less common and, of course, produce a clinical picture quite in contrast with that which results from an ordinary carcinoma of the pancreas. The usual type of pancreatic neoplasm will be considered first.

Although carcinoma of the pancreas has been recognized as a clinical entity for many years, relatively little progress has been made in its treatment. Unfortunately, it often is unrecognized until it has existed for some time, since it usually fails to produce significant symptoms early in its development. This fact, coupled with the tendency shown by these tumors to spread early to areas of lymphatic drainage, and the inherent difficulties of performing an adequate operation for cancer in this region have made the surgical treatment of pancreatic cancer a most discouraging problem.

The site of development of the carcinoma within the pancreas influences importantly the *symptoms* which may occur. In marked contrast to a lesion which arises in the body or tail of the gland, a growth situated close to the common bile duct may produce jaundice relatively early in its development. Likewise, a neoplasm which develops immediately adjacent to the duodenum may cause duodenal ulceration, which in itself results in bleeding or other symptoms. One of three main clinical pictures is usually caused by cancer of the pancreas: (1) unexplained, progressive jaundice, with or without pain; (2) recurring pain—gradually becoming persistent—in the upper part of the abdomen, which is commonly referred through into the back and which is unassociated with any significant physical or laboratory findings; and (3) gradual decline in health, associated perhaps with anorexia, bloating, a nondescript type of indigestion and loss of weight and strength.

From the point of view of diagnosis, in contrast with older teachings, it should be emphasized that pain is a prominent symptom in the majority of cases of carcinoma of the pancreas. In the reports in the literature, the incidence of pain with this lesion varies from approximately 55 to 83 per cent. These figures refer to the time at which the patient presents himself for diagnosis, since the incidence of pain is even higher late in the course of the disease. The phrase "painless jaundice" has undoubtedly received too much emphasis in the diagnosis of jaundice that is caused by a pancreatic neoplasm. Characteristically, the pain associated with carcinoma of the pancreas is dull at the beginning, but gradually becomes more severe and often requires hypodermic medication. In contrast with a typical colic type of pain, it is usually constant and boring.

The most common physical findings are loss of weight and the presence of a mass in the upper part of the abdomen. The mass may be caused by the tumor itself, in which event it is usually fixed, firm and not significantly tender. Jaundice may or may not be present. In the presence of jaundice, the gallbladder is distended in the majority of cases and may form a somewhat movable, rounded, nontender mass in the right upper quadrant of the abdomen. Enlargement of the liver is a common finding if jaundice is present. Ascites is uncommon, except in far-advanced disease.

Laboratory studies may be of little positive value in the diagnosis of carcinoma of the pancreas, but may be of some "negative value" in the elimination of other possible conditions as a cause of the patient's symptoms. Some degree of anemia is common. If jaundice is present, the laboratory findings will indicate an obstructive type of jaundice. Duodenal drainage under these circumstances generally is productive of little if any bile, and blood may be detected in the aspirated material. If the pancreatic ducts have been occluded by the neoplasm, there may be evidence of external pancreatic insufficiency. Diabetes is uncommon.

In a relatively small percentage of cases, evidence of external pressure may be noted on roentgenographic examination of the stomach and duodenum. Occasionally, duodenal ulcer will be diagnosed by the roentgenologist because of secondary involvement of the duodenum.

The surgical treatment of carcinoma of the pancreas presents a discouraging picture at best. Usually, upon exploration of the abdomen, the diagnosis is at once apparent because of the finding of an extremely hard mass in the pancreas. At times, it may be difficult to distinguish carcinoma from pancreatitis by palpation and inspection of the involved site. Ordinary biopsy of an indurated area or mass in the pancreas is a rather unsatisfactory procedure, as a rule, and often does not reveal conclusive evidence as to the nature of the lesion. Biopsy of the mass, performed with the Silverman needle, may be helpful in this regard, although several specimens may be necessary before a satisfactory one is obtained for

diagnosis. Use of this needle permits one to obtain a specimen from a deep portion of the mass without an undue amount of trauma. Negative biopsy findings do not exclude cancer.

After the diagnosis of cancer of the pancreas has been established at the time of operation, one must then decide whether the lesion can be removed in a satisfactory manner. Here, as elsewhere, it is difficult to be dogmatic in describing the findings which make for inoperability. Some surgeons have reported quite extensive procedures which they have employed in the removal of pancreatic carcinoma. Personally, I am inclined to believe that if the lesion is mobile and limited to the pancreas, resection may be reasonable, even though on the basis of previous experience the ultimate prognosis may not be good.

On the other hand, if there is involvement of regional lymph nodes or the superior mesenteric vessels, or if there is extension and fixation to surrounding structures, the chance of cure has probably passed, and an extensive operation may not be warranted. Under these circumstances, a palliative procedure can be accomplished with lower operative mortality, less postoperative morbidity and, in most cases, fairly complete relief of symptoms. Length of life after such a procedure is usually between six and twelve months. Some surgeons have a different attitude about the treatment of carcinoma of the pancreas, for they contend that resection should be carried out even for the more advanced lesions.

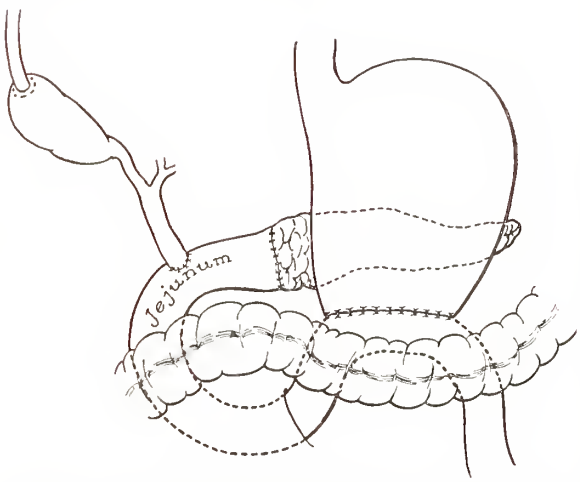


Figure 3. Type of operation employed in resection of the head of the pancreas. Cholecystostomy now is omitted.

Resection of the head of the pancreas for carcinoma, first reported by Whipple as a two-stage procedure in 1935, has been performed in a wide variety of ways. Few surgeons have had adequate experience with this operation to develop a standardized technic. In my experience, the simplest and most satisfactory plan is that which, so far as I know, was first described by Waugh and co-workers[4] (Figure 3). This consists of resection of the distal portion of the stomach, duodenum, head of the pancreas and distal end of the common bile duct. The jejunum is mobilized at the ligament of Treitz, and the upper end of the jejunum is brought up, so as to occupy the position formerly occupied by the duodenum. The cut end of the pancreas is implanted into the end of the jejunum. An end-to-side choledochojejunostomy is then performed a short distance distal to the site of the pancreaticojejunostomy. Gastrointestinal continuity is accomplished by a Polya type of anastomosis between the stomach and jejunum. Ordinarily, this procedure is accomplished in one stage, and it has the advantage of relative simplicity, providing drainage of bile and pancreatic secretions into the jejunum in what amounts to a defunctionalized loop of jejunum. In addition, the duodenal juices enter the intestinal tract proximal to the gastrojejunal anastomosis.

An excisable neoplastic lesion of the pancreas which does not involve the head of the gland usually requires a less extensive procedure. Under these circumstances, all of the gland distal to and including the growth is excised, and the head of the gland is not disturbed. This resection is commonly performed by working through the divided gastrocolic omentum. Splenectomy is usually performed at the same time, either to facilitate the operation or as an aid in removing all of the malignant tissue. One should never excise a portion of the pancreas and leave in place a part of the gland distal to the site of resection, unless provision is made for drainage of external secretion from this portion of the gland into the intestinal tract.

When operation is performed on a patient who has a carcinoma of the head of the pancreas that has exceeded the limits of resectability and which produces obstructive jaundice, some palliation may usually be afforded the patient even though the lesion is not excised. Generally, this is accomplished by some form of internal biliary drainage. It is usually my practice, when I perform a cholecystojejunostomy, to use a loop of jejunum, although other types of anastomosis are used at times, depending on the findings at operation. An entero-anastomosis between the jejunal limbs may be of advantage in some cases of this type. External biliary drainage definitely is a procedure of second choice, mainly because of the unpleasant features of this procedure from the patient's point of view. Relief of pruritus is almost invariably obtained by an operation which permits adequate drainage of bile, and this in itself affords great satisfaction to the patient. Significant prolongation of life, however, is probably seldom achieved by any palliative procedure.

If the neoplastic lesion is situated in the body of the gland, rather than in the head, the main objective from a palliative point of view usually

is relief of pain, rather than relief of jaundice. Pain relief presents a somewhat more difficult problem. During recent years, alcohol has been injected into the splanchnic nerves on both sides with some benefit. This may result in relief of most of the pain for a period of two to four months. Splanchnicectomy may be considered in some cases.

TUMORS OF THE ISLETS OF LANGERHANS

Since 1926, when W. J. Mayo operated upon the first patient who had a tumor of the islets of Langerhans associated with hyperinsulinism, a significant number of cases of this type have been reported. In a few cases, a tumor of the islet cells has been found without associated hypoglycemia; however, cases of this type are definitely the exception rather than the rule.

Clinically, the *diagnosis* of hypoglycemia due to a tumor of the islets of Langerhans usually can be suspected from the history. Commonly, the patient will complain of "fits," spells of weakness, periodic loss of consciousness or "attacks" which may vary considerably in their severity. Generally, there is sweating, salivation, muscular relaxation and tremor in the early phase. Subsequently, if the attack progresses, the patient becomes somewhat disoriented and loses consciousness. A tonic type of convulsion may ensue. Not infrequently, patients with this condition have been arrested for drunkenness or have been thought to have a brain tumor. All symptoms respond promptly to the administration of dextrose.

Whipple first described the triad of findings which now are commonly recognized as the cardinal features in the diagnosis of hyperfunctioning tumor of the islet cells. The components of this syndrome are: (1) nervous or gastrointestinal disturbances that appear in the fasting state; (2) attacks that are associated with hypoglycemia, the values for blood sugar being 50 mg. per 100 cc., or lower; and (3) attacks that are relieved promptly by the administration of dextrose. The dextrose-tolerance test, previously used as a diagnostic procedure, is now known to be of no value in the diagnosis. Determinations of the value for blood sugar during a prolonged fasting state constitute the laboratory procedure of most value. Liver-function tests should indicate normal hepatic function. The possibility of malingering should always be kept in mind, since several malingerers have produced attacks of hypoglycemia by self-administration of insulin. Occasionally, lesions of the central nervous system, liver, pituitary body or suprarenal gland may be confused with tumor of the islet cells, but these are uncommon.

Pathologically, most tumors of the islet cells are so-called adenomas. Some pathologists consider these to be entirely benign, but others classify the malignancy as grade I (method of Broders) because of the histologic picture which they present. Clinically, tumors of this type exhibit no characteristics of malignancy. In a small percentage of cases, probably not more than 15 per cent, these adenomas may be multiple. A few cases of adenoma in aberrant pancreatic tissue have been reported. Definitely malignant tumors of the islet cells occur in a small percentage of cases, probably not more than 18 per cent, and may give rise to metastasis. These tumors are multiple somewhat more often than are the benign adenomas. A condition described as adenomatosis of the islet cells has been reported in a few cases in association with hypoglycemia. In addition, a few cases of hypoglycemia have been reported with no apparent abnormality of the islet cells; however, cases of this type must be viewed with some degree of suspicion because of the possibility of an extremely small adenoma that was overlooked in the pathologic examination of the pancreas (the smallest reported adenomas known to have been associated with hypoglycemia were 2.5 mm. in diameter).

Medical treatment has never offered a satisfactory solution for hyperfunctioning adenoma of the islets of Langerhans. In the exceptional case of borderline hypoglycemia, medical measures may control the symptoms fairly well; however, in this type of case, it is likely that no true tumor of the islet cells is present. Frequently, the patient has discovered that glucose in some form will relieve his symptoms, and as a result he has eaten excessively in order to prevent attacks. Consequently, many patients are quite obese when they present themselves for operation, a circumstance which, of course, adds to the difficulty of the surgical procedure.

Surgical treatment for tumor of the islet cells associated with hypoglycemia may be very satisfactory if a relatively small functioning adenoma is found in an easily accessible portion of the gland. On the other hand, it may be much less satisfactory if no tumor is found or if an extensive neoplastic process is encountered. In the majority of cases, however, an adenoma is found and removed, along with a variable amount of the pancreas, and the patient enjoys a very satisfactory postoperative result. The abdominal incision which has been most satisfactory for exploration of the pancreas, in my experience, is a slightly curved transverse incision, with the convexity directed upward and placed approximately midway between the tip of the xiphoid process and the umbilicus. The pancreas, then, is usually approached through the gastrocolic omentum, by retraction of the stomach anteriorly and upward.

Because some small adenomas of the islet cells have virtually the same consistency and color as normal pancreatic tissue, their recognition may be difficult. This is especially true if the lesion is situated within the parenchyma of the gland so that it is not visible on the surface. Fortunately, most adenomas have a somewhat greater con-

sistency than normal pancreatic tissue and also a deeper color, varying from dark yellow to brown. As an initial procedure, it is a good plan to explore the entire pancreas carefully, since, even though a tumor is apparent, multiple lesions may be present. Lateral mobilization of the duodenum aids in the adequate inspection and palpation of the head of the pancreas. Only about 20 to 25 per cent of adenomas are found in the head of the gland, the remainder being in the body or tail. That, of course, is fortunate, so far as the removal of these lesions is concerned.

For the removal of a relatively small, encapsulated tumor, local excision is the simplest procedure and ordinarily can be readily accomplished. At times, it may be necessary to resect the pancreas in order to remove the tumor. If this is done, resection of the pancreas should be started at the tail and carried toward the head of the gland until one has progressed far enough to include the tumor in the excised portion of pancreas. The remaining end of the pancreas is then sutured with silk. Resection of the pancreas so that a portion of the gland is left distally, disconnected from the rest of the pancreas, is inadvisable.

The type of case which offers the most difficult problem is that in which careful exploration of the entire pancreas reveals no tumor. The surgeon, of course, is not necessarily to conclude that there is no tumor present, but merely that he has been unable to locate one. It is common practice under those circumstances to remove approximately two-thirds to three-quarters of the pancreas, starting the resection at the tail and bringing it toward the head of the gland, usually stopping at the superior mesenteric vessels. A good result may be anticipated if there is a tumor in the excised portion of the pancreas. If no tumor is found in that portion, a favorable result may or may not be obtained. Usually, however, it is necessary to remove more pancreatic tissue at a subsequent operation. In the experimental animal it is necessary to excise at least 90 per cent of the pancreas in order to produce diabetes, and clinical evidence suggests a similar situation in man. A second resection is most likely to be successful in relieving the patient if a tumor is found in the excised portion. A search for ectopic pancreatic tissue is always advisable when no tumor is found in the pancreas. Although total pancreatectomy has been performed as a primary procedure in a case of hyperinsulinism in which no tumor could be found, it is not a recommended procedure.

REFERENCES

1. Gambill, E. E., Comfort, M. W., and Baggenstoss, A. H.: Chronic relapsing pancreatitis: an analysis of 27 cases associated with disease of the biliary tract. Gastroenterology, **11**:1-33, (July) 1948.
2. Puestow, Charles: Discussion. Tr. West. S. A., **61**:243-244, 1953.
3. Probstein, J. G.: Pseudocyst of the pancreas: diagnosis and therapy. Report of ten cases treated by transcystogastrostomy. Arch. Surg., **69**:425-431, (Sept.) 1954.
4. Miller, E. M., Dockerty, M. B., Wollaeger, E. E., and Waugh, J. M.: Carcinoma in the region of the papilla of Vater: a study of cases in which resection was performed. Surg., Gynec. & Obst., **92**:172-182, (Feb.) 1951.

POSTGRADUATE COURSES AT MINNEAPOLIS

The University of Minnesota announces the following courses, to be conducted at the Center for Continuation Study on its Minneapolis campus:

February 14-16 Recent Advances in Internal Medicine (hematology, cardiology, endocrinology and respiratory physiology) for Internists.

February 17-19 Cancer Detection for General Physicians

February 28-March 2 Clinical Hematology for Physicians (anemias, leukemias, coagulation defects)

March 3-5 Clinical Dietetics for Dietitians (recent advances in medicine and their relationship to the field of dietetics)

March 21-23 Cardiovascular Diseases for General Physicians (with emphasis on treatment)

March 31-April 2 Emergency Surgery for General Physicians (course under the direction of Dr. O. H. Wangensteen, chairman of the U. of M. Department of Surgery)

IMPORTANT REQUEST FROM THE AMA

Within the next few weeks, a directory information card will have been mailed to every physician in the United States, its dependencies and Canada, asking for data to be used in compiling the 19th Edition of the AMERICAN MEDICAL DIRECTORY. The new volume will be distributed next summer.

Each physician is asked to return his card promptly, *even if no change needs be made* in the information about him that appeared in the 1950 book. Each is also urged to fill out the right-hand half of the card, which asks for information that will be used exclusively for statistical purposes. Even though the doctor has given such data recently, it is important that he mail the card promptly to the Directory Department of the American Medical Association to insure an accurate listing of his name, address and other "Who's Who" details. There is no charge for publishing the data, nor is the physician obligated in any other way.

The DIRECTORY is one of the most important services that the AMA renders to the medical profession and to the general public of the United States. Only in it can be found dependable data concerning physicians, hospitals, medical organizations and activities.

For the first time in the forthcoming edition, special symbols will be used to distinguish the various types of membership in the AMA, and a special symbol will also designate physicians who hold membership in a constituent society but not in the AMA.

Carcinoma of the Thyroid Gland

MARTIN A. BLACKSTONE, M.D.

SIOUX CITY

CARCINOMA OF THE thyroid gland comprises about one per cent of all malignancies. This paper reviews 219 surgically treated cases of goiter operated during the period from 1949 to 1953. There were 16 malignancies in the whole group, and, primarily, I shall review them.

A brief general breakdown of the series may be of interest:

1. Primary hyperthyroidism ..... 35 cases
2. Multiple adenomata with hyperthyroidism ..... 41 cases
3. Multiple adenomata without hyperthyroidism ..... 42 cases
4. Solitary adenoma without hyperthyroidism ..... 63 cases
5. Solitary adenoma with hyperthyroidism 7 cases
6. Chronic thyroiditis ..... 16 cases
7. Carcinomas ..... 16 cases

The incidence for cancer of the thyroid reported from various sources are at considerable variance, the figures from post-mortem series being much lower than those from large thyroid clinics. There may be honest differences of opinion about malignancy in a specimen, yet the criteria should be the same as for other malignancies. It is on the low-grade malignancies that surgical pathologists are most at variance. There was no association of malignancy and hyperthyroidism in our series, and as a general rule the larger groups agree in reporting this lack of any association.

Although one finds a small group of undifferentiated carcinomas that have no relationship to adenomas, the solitary thyroid adenoma has a relationship to most thyroid malignancies. Many pathologists regard the solitary adenoma as the precursor of malignancy, but others feel that the malignancy develops at the same time as the adenoma. The solitary adenoma is a true tumor, whereas multiple adenomata represent some areas of physiological change as a result of different rates of activity in the gland. Multiple nodular goiters may also contain a true adenoma, and this may be associated with malignancy, as is indicated by two of the cases that I shall present.

In our series, we have considered as malignant only those specimens of tumors that showed blood vessel invasion or capsular break-through. There are some thyroid adenomas that reveal their malignant character only by the presence of regional metastases without capsular break-through. One such case is reported in this series.

CASES

The 16 malignancies will be divided into gross subgroups on the basis of their clinical manifestations. The malignancies occurred in both sexes, with the ages ranging from 14 to 69 years.

The first subdivision of the cases illustrates a most vicious type of malignancy. These patients were all seen only a few months after a goiter was noted. The complaints were definite and of increasing severity. These included painful, tender and enlarging thyroids, with signs and symptoms of pressure including dyspnea, dysphagia and hoarseness. Laryngoscopic examination showed one-sided abductor cord paralysis, and sub-glottic swelling in two cases. The thyroids were irregular to palpation, hard and diffusely enlarged. There were palpable, enlarged cervical glands in one case.

The trachea may be compressed and displaced enough to require tracheotomy for relief of respiratory embarrassment. Surgical treatment aimed at complete ablation of the thyroid, combined with radical neck dissection, may be very difficult, if not impossible in this type of involvement. The extent of involvement may allow removal of pressure by no other means than the unroofing of the trachea. X-ray therapy may be of great value.

One of the cases in this group had deep therapy after thyroidectomy and has lived almost five years without evidence of recurrence. The other two patients in this group died within a few weeks after the X-ray therapy was completed. Microscopically, these tumors were undifferentiated carcinomas, and were much more anaplastic than most carcinomas of the thyroid. As noted previously, this type of cancer probably bears no relation to an antecedent adenoma. The real possibility of confusing a thyroiditis and a malignancy of this type must be kept in mind. We feel that in many instances the question can be settled only by a biopsy of the gland.

There were two malignancies occurring in patients with multiple nodular goiters. Pathologic examination showed that malignancy actually occurred in a single, true adenoma. The other areas of nodularity showed the usual alterations of so-called multiple adenomatous goiters.

The next four cases were seen because the entering complaint was the presence of a nodule, or nodules, in the cervical chains. The nodules varied from 0.5 to 2.0 cm. in size. Usually, they

were soft to the point of being cystic, they were non-tender and they were located in the deep chain along the anterior border of the sternocleidomastoid muscle. In this group there were none of the usual systemic signs or symptoms of a metastasizing carcinoma. Three of the four cases seen with lateral neck nodules had an easily palpable, solitary nodule in the thyroid. The nodules were on the same side as the thyroid involvement in all three. The patients had been aware of having a goiter for varying periods ranging from two to eight years, and there was no history of any recent changes in the thyroid. The fourth case in this division occurred in a 14-year-old girl. She was seen because of one solitary 2 cm. cystis mass in the mid-left neck. The thyroid was not palpable. The lateral mass was excised, and a papillary carcinoma of the thyroid was reported on frozen section. The operation was continued, and exposure of the thyroid gland showed three separate nodules scattered throughout the left lobe. The largest of these was 1 cm. on cross section. All three nodules in the left lobe of the thyroid showed papillary carcinoma. Thyroidectomy, with unilateral neck dissection of the affected side, was the operative procedure in all four cases presenting with lateral neck metastasis.

In the next eight cases, malignancies occurred in solitary adenomas, and the presence of malignancy was determined at surgery. The patients were first seen for a variety of conditions, many of which had no connection with the goiter. Several of the patients were unaware of the presence of an adenoma until physical examination had been completed. The size of the adenoma was not found to bear a relationship to the chance of malignancy. There were no other diagnostic signs of serious import. Surgical treatment was advised solely on the basis of the adenoma. Hemi-thyroidectomy was carried out, and the malignant character of the tissue was discovered by means of frozen section and/or fixed sections. Complete extirpation of the adenoma with the surrounding normal tissue was the treatment used in this group.

A recent case not included in the series illustrates the problem of solitary adenoma and its relationship to carcinoma. A 63-year-old female had a right-sided nodule which, from the description, had been 3 to 4 cm. in diameter for at least 20 years. Over the years, she had had various medical consultations for other difficulties, and although the nodule was seen, no definite advice was given the patient. During the immediate several months before surgery, the adenoma had gradually doubled in size. When thyroidectomy was done, frozen section revealed a papillary adenocarcinoma. There was no evidence of glandular involvement beyond the adenoma, and neck dissection was not carried out.

SUMMARY AND CONCLUSIONS

We have reviewed 219 operated thyroids and have directed our attention toward the problem of malignancy. The preponderance of cancers of the thyroid in this small series was closely related to the solitary adenoma of the thyroid. This relationship has been amply demonstrated in many larger series. The incidence of malignancy has averaged about ten per cent in the reports issued by large thyroid clinics. The general operative mortality is considerably less than one per cent, and there were no operative deaths in this group. Most malignancies of the thyroid are of low grade, and in most cases, early removal of the affected lobe will prevent later extension.

Sectional Meetings of ACS in Cleveland

More than 2,500 surgeons, surgical specialists, nurses, anesthesiologists and other medical personnel from Canada and the United States are expected at a four-day sectional meeting of the American College of Surgeons, at the Hotels Cleveland and Hollenden, in Cleveland, February 21-24.

The program will include panel discussions, symposia, surgical clinics in eight Cleveland hospitals, scientific papers, cine clinic films and separate programs in the surgical specialties of obstetrics and gynecology, ophthalmology, orthopedic surgery, otolaryngology, thoracic surgery and urology. Two innovations this year are an educational program for personnel other than surgeons who are concerned with the complete care of surgical patients, and a series of short papers on surgical research problems selected from the Surgical Forum prepared for the 1954 Clinical Congress.

In connection with the College's objective of improving the over-all care of the surgical patient, an outstanding three-day nurses' program has been planned with the cooperation of the American Hospital Association, the National League for Nursing, the Ohio Hospital Association and the Ohio Nurses Association. Also, for the first time, nurses will be included in the scientific portions of the meeting. Speakers at the nurses' meetings will include surgeons, anesthesiologists and College officials.

Protean Manifestations of
Periarteritis Nodosa

ATLEE B. HENDRICKS, M.D.

DAVENPORT

PRIMARY PERIARTERITIS nodosa, according to Zeek, is a form of necrotizing angiitis, and because of the frequent widespread involvement of the angiitis in several systems at the same time, it is classified as a "multiple system" disease. It is not a common ailment and has been described as one "in which there is a disproportion between the number and severity of the symptoms and the disease which is assumed to be the cause."[9] Because of the variety of sites of the "target area" and the changing pattern of the pathologic process in those areas, diagnosis can be established with certainty only by microscopic examination of muscle tissue at biopsy or at necropsy. Consequently, an awareness of the existence of the disease is all-important. The multiple system involvement is often so bizarre as to suggest psychoneurosis. When such vague and bizarre signs and symptoms, indicating multiple system involvement, are presented to the physician, a high index of suspicion is necessary if he is to consider the disease in the differential diagnosis. The following three cases illustrate the problem and point out the value of a muscle biopsy when the clinical history suggests an unusual pattern.

CASE NO. 1

A 46-year-old woman schoolteacher was admitted to the hospital because of hematuria. By retrograde pyelograms, her referring physician had found a suspicious area in the lower pole of her left kidney and had thought she might possibly have a kidney abscess. By the time she had arrived at the hospital, her urological signs and symptoms had cleared, but she gave a long history of intermittent chills and fever, intermittent diarrhea, rashes, nervous stomach and migratory joint pains. Her history was so bizarre that it was difficult for us to decide what tests should be ordered. To rule out any pathology in the systems referred to in her complaints, we did a rather thorough work-up. She had roentgens of the upper gastrointestinal tract, a colon series, stools for ova and parasites, blood cultures, smears for malaria, agglutinations for typhoid and brucella, total plasma proteins, with albumen and globulin fractionations, and complete blood counts, including the differentials. The results of these tests were all within normal limits. Her only positive finding was a markedly elevated sedimentation rate, averaging about 100 mm. per hour, by the Westergren method. During all of this time she ran a stormy course, with a fever of 102-104 degrees Fahrenheit, although at no time did she look so ill as the fever indicated. She had a peculiar rash which the dermatologic consultant considered to be a drug reaction.

Finally, a muscle biopsy was taken from her right thigh, and the pathology report was "panarteritis." We treated her with cortisone, starting with 100 mg. per day and gradually reducing the doses. She responded well to the medication, with reduction of the fever and gradual disappearance of the other symptoms. Thirty-six months later, the patient was doing very well and was symptom-free. She has been teaching for the past three years and takes cortisone only intermittently. Her current dosage is 75-100 mg. of cortisone every three or four weeks.

CASE NO. 2

A 67-year-old widow who stated that she had "gone downhill" since her husband died, 15 months prior to her admission to the hospital, complained of weakness, gradual weight loss from 176 to 151 pounds, and a low-grade anemia. She had pains in the chest, left shoulder girdle, left side of the neck and left arm. Further questioning failed to elicit other significant symptoms. Her past history was non-contributory. Examination revealed a well developed, well nourished, alert and cooperative, but chronically ill woman. Her blood pressure was 160/90. There was a grade III basal systolic murmur radiating into the neck vessels. There was some tenderness over the left deltoid muscle, and there was definite weakness of the left arm, forearm and wrist, although there were no sensory changes. The red blood cell count was 3,900,000, the white blood cell count was 10,000 and the hemoglobin was 11 grams. A differential count revealed 45 per cent eosinophils. The urine analysis was normal, and the total plasma proteins, with fractionation, were normal. A biopsy taken from the left trapezius muscle revealed typical "polyarteritis nodosa."

The patient was started on cortisone, and within 72 hours she was fever-free. As I write this paper, she has been symptom-free for about nine months, while taking oral cortisone, in doses averaging 50 mg. per day.

CASE NO. 3

A 61-year-old farmer complained of dyspnea and edema for two weeks prior to his admission.

His physician had placed him on a salt-free diet, digitalis and mercurial diuretics, and his edema had subsided in less than a week. But the patient then complained of extreme weakness and of numbness and tingling of his hands and feet. He soon became completely incapacitated and complained of severe pain in his extremities. The man looked somewhat older than his stated age. The admission examination revealed that the vessels were thickened, tortuous and sclerotic, but no nodules were noted. The heart was enlarged to the anterior axillary line, and the left ventricle was overactive and overaccessible. There was a grade IV systolic murmur heard over the entire precordium, but loudest at the base and transmitted into the neck vessels. The blood pressure was 160/100, and the rhythm was a normal sinus mechanism. The neurologic examination revealed loss of position sense of the toes, decreased pain sensation of the hands and feet, and generalized weakness of the muscles of the extremities. The deep reflexes, however, were present but diminished. The admission blood count showed 27,000 white cells, with 49 per cent eosinophils. The urine analysis was normal. The electrocardiogram indicated a left ventricular hypertrophy. A muscle biopsy from the calf of the right leg was interpreted as "periarteritis nodosa." The patient was started on cortisone, with generalized improvement, and at the time of his discharge from the hospital, he was able to stand and to take a few steps. For the past six months he has not made much progress, from a neurologic standpoint.

CLASSIFICATION

Periarteritis nodosa, since it was first described by Kussmaul and Maier in 1866, has encompassed many vascular conditions, a considerable number of which have very little similarity to the original disease. Zeek recently reviewed the literature and divided the history of the disease into three parts.[3] In the first period, from 1866 to 1900, there was general agreement as regards the pathology, but the etiology was unidentified. Toxic or infectious agents of unknown type were suspected as causative factors, but none were proved. The second period, from 1900 to 1925, was characterized by an attempt, by means of animal experiments, to establish an etiologic agent, such as a specific bacterium, a toxin or a virus. These efforts, likewise, were unsuccessful. The third period, from 1925 to 1952, was characterized by the development of the concept that the disease might represent a generalized systemic hypersensitivity, with resultant reaction upon vessel walls. Drugs such as iodides, thiouracil, Dilantin, horse serum and sulfanilamides were suspected of being sensitizing agents. Final proof of their responsibility in periarteritis was, however, never unequivocally established.

Because of the variety of clinical and pathologic patterns appearing in these diseases that have been designated "periarteritis nodosa," Zeek has suggested that the general term "necrotizing angiitis" be used. Several types can be differentiated morphologically and clinically: (1) rheumatic arteritis, (2) hypersensitivity angiitis, (3) allergic granulomatous angiitis, (4) periarteritis nodosa and (5) temporal arteritis.[1] Perhaps in the near future, additions can be made to that list.

PATHOLOGY

The protean manifestations of periarteritis nodosa depend on the various phases of the pathologic process, with resultant complications. The basic process is a fibrinoid necrosis and an inflammatory reaction in the vessel walls.[3] Then, one finds occlusion, thrombosis, aneurysm and hemorrhage of the vessels, as well as infarction of the dependent tissue. Four stages of the process are described: (1) the degenerative stage, in which edema and fibrinous exudate develop about the inner elastic membrane and the muscle walls are separated by the exudate; (2) the acute inflammatory stage, in which there is an infiltration into the wall of polymorphonuclear leukocytes followed by necrosis of the wall; (3) the stage of granulation and repair, characterized by replacement of the acute inflammatory cells by a round-cell infiltration and fibroblast proliferation; and (4) the final or healing stage, characterized by scar formation. Any or all of these stages may present at one time in any one case.[8] The pattern of the disease depends upon the end organs or "target areas" involved, and the immediate prognosis depends upon whether or not a vital organ has been afflicted.

The vessels involved in *periarteritis nodosa* are medium- to small-sized muscular type arteries in the gastrointestinal tract, kidneys, pancreas, heart and other areas in close proximity to the peripheral nerves. Early reports indicate that the pulmonary vessels are rarely involved and the bronchial vessels only occasionally. Recently, however, a report has been published describing 19 cases of periarteritis nodosa having pulmonary aspects. Eleven died and nine were autopsied. Five had involvement of the bronchial arteries; two had involvement of the pulmonary arteries; and in one case both systems were involved.[4]

In contrast, *hypersensitivty angiitis* involves venules, as well as small arteries and arterioles. The microscopic appearance is one of relatively intense and acute inflammatory reaction, and the target areas are the skin, lungs, heart, kidneys and connective tissue.

Rheumatic arteritis is characterized by an active, acute inflammation in the vessel wall, with minimal fibrinoid necrosis. The lesions are found chiefly in the heart and are associated with Aschoff bodies.

Temporal arteritis is characterized by foci of necrosis in the cranial arteries, and the inflam-

matory reaction includes foreign body giant cells.

The changes of *allergic granulomatous angiitis* occur predominantly in the heart and consist of eosinophils undergoing necrosis, with a fibrinoid reaction in the connective tissue and a granulomatous proliferation of epitheloid and giant cells.[1] The pathogenesis and nature of this process are unknown. The one common characteristic of this group of diseases is the precipitation of acid mucopolysaccharide in the ground substance of the connective tissue.[1] Boyd postulates that there are changes in the tissue permeability of the ground substance, and that it may be related to hyaluronadase.

CLINICAL FINDINGS

A protean pathologic picture is followed by a protean clinical picture. In a patient who may or may not appear acutely ill, any number of signs and symptoms can be observed, such as pallor, weakness, fever, tachycardia, weight loss, renal disturbance, gastrointestinal disturbance, hypertension and peripheral neuropathy. A history of drug ingestion is seldom obtained. Fever, peripheral neuritis and hypertension are almost universally present, and other manifestations such as muscle tenderness, eosinophilia, gastrointestinal hemorrhage with pain, microscopic hematuria and congestive heart failure are less often present.

Recent emphasis on the pulmonary aspects of periarteritis nodosa indicates that more attention should be paid to the lungs, especially if the clinical picture suggests pulmonary disease. In the past, roentgen changes have not been considered characteristic of the disease, and the pathologic findings in the lungs have been minimal. However, of eight living cases of established periarteritis nodosa, all had symptoms of cough, hemoptysis, dyspnea or chest pain, and the roentgen findings in all of them showed either hilar enlargement, parenchymal infiltration or nodules. There were eleven fatal cases, of which nine were autopsied. All had one or another of the symptoms mentioned, and of the ten who were X-rayed, nine showed hilar enlargement, and eight showed parenchymal infiltration. One of the typical roentgen findings is the "batwing" or butterfly areas of edema about both hili, the peripheral areas remaining normally translucent. More advanced lung changes consist of extensive areas of perivascular infiltration and parenchymal infiltration, with some generalized haziness extending out from the hilar areas into the lung fields.[4]

DIAGNOSIS

The final diagnosis of periarteritis nodosa depends upon the microscopic finding of tissue taken at time of biopsy or at necropsy. The disease can be subdivided into: (1) primary periarteritis nodosa; (2) secondary periarteritis nodosa; and (3) a category which is not true periarteritis nodosa, but a microscopic picture of disease similar to it that invades tissue close to a site of infection.[2] Plaut recently described 88 cases in which lesions in the appendix had no demonstrable correlation with the clinical symptoms or the other pathologic changes.[6]

Secondary periarteritis nodosa is not related to the primary type. It represents the pathologic findings which develop in terminal cases of malignant hypertension. The lesions usually develop just before death, and any clinical pattern suggestive of primary periarteritis nodosa is masked by the severe renal disease and the hypertension.

An unawareness of the incidence of the disease and the inadequacy of muscle tissue secured for biopsy are probably the two most important reasons for the infrequency of diagnosis. Although the disease is not common, it is by no means rare. Two decades ago, it was the subject of case reports only from medical centers, but now it is frequently diagnosed in small general hospitals in average-sized communities. In 1938, Boyd found 395 reported cases in the literature. In the past three years, four cases have been definitely diagnosed in Scott County, Iowa.

The muscle biopsy tissue must be adequate. If a specimen is too small to include vessels involved in the inflammatory process, or if it has been taken from an area far removed from the active process, the exact and accurate diagnosis will probably be missed.

TREATMENT

There is no specific treatment for periarteritis nodosa. Cortisone and ACTH have been used, the rationale being that the disease is somewhat related to rheumatic fever and rheumatoid arthritis, both of which have responded to those drugs. Baggenstross treated two cases of established periarteritis nodosa with cortisone, and he reported in detail on the necropsy findings. A physician, age 45, died after 75 days of observation, and treatment with a total of 3.62 grams of cortisone. There was complete healing of all arterial lesions. Not a single vessel showed active inflammation. Every organ had been involved, but the most severe degree of reaction had been in the kidneys, heart, liver and mesentery. The second case was a 48-year-old man who was under observation for 146 days and who received 13.7 grams of cortisone. At autopsy, he too revealed no active inflammatory process. Aneurysm formation was prominent in the coronary, hepatic, pancreatic, mesenteric, renal and cerebral arteries. In both cases therapy had had to be discontinued because of congestive heart failure and electrolyte imbalance. The adrenal glands of both patients showed atrophy.[5]

The efficacy of treatment is difficult to evaluate, for the disease has a natural history of relapse and remission. The degree of involve-

ment of the multiple systems is a factor. Life may terminate rather quickly if thrombosis, hemorrhage or aneurysm suddenly causes insufficiency in a vital organ. In the two cases reported by Baggenstross, complete healing occurred in every involved vessel, but the patients both died of the pathologic sequelae of healed periarteritis nodosa, such as aneurysm formation, thrombosis, infarction and hemorrhage. Of these three cases on which I have reported, the first has been in remission for 36 months on cortisone, every third to four week. The second patient has been leading a normal life, on cortisone, for a period of eight months after the diagnosis was established. The third case is improved, but is not ambulatory because of the neuritis.

These findings coincide with Zeek's observations that cortisone and ACTH may be beneficial to lesions of one type of necrotizing angiitis, but harmful to lesions of another type. Therefore, careful classification and differentiation has potential importance.[1]

SUMMARY

The protean manifestations, or "multiple system" involvement, of periarteritis nodosa depends on the pathologic process in the vessel walls of the various systems. Practically any set of vessels or organs in the body are the "target sites" of the sequelae, such as thrombosis, aneurysm, hemorrhage or infarction. Increasing awareness of the disease will lead to more frequent diagnosis of periarteritis nodosa or some other form of necrotizing angiitis.

BIBLIOGRAPHY

1. Zeek, P. M.: Periarteritis nodosa and other forms of necrotizing angiitis. New England J. Med., **248**:764-772, (Apr. 30) 1953.
2. Knowles, H. C., Zeek, P. M., and Blankenhorn, M. A.: Studies on necrotizing angiitis: IV. Periarteritis nodosa and hypersensitivity angiitis. A.M.A. Arch. Int. Med., **92**:789-805, (Dec.) 1953.
3. Zeek, P. M.: Periarteritis nodosa: critical review. Am. J. Clin. Path., **22**:777-790, (Aug.) 1952.
4. Doub, H. P., Goodrich, B. E., and Gish, J. R.: Pulmonary aspects of polyarteritis (periarteritis nodosa). Am. J. Roentgenol., **71**:785-793, (May) 1954.
5. Baggenstross, A. H., Shick, R. M., and Polley, H. F.: Effect of cortisone on lesions of periarteritis nodosa. Am. J. Path., **27**:537-559, (July-Aug.) 1951.
6. Plaut, A.: Asymptomatic focal arteritis of appendix: 88 cases. Am. J. Path., **27**:247-263, (Mar.-Apr.) 1951.
7. Kernohan, J. W., and Woltman, H. W.: Periarteritis nodosa: clinicopathologic study with special reference to the nervous system. Arch. Neurol. & Psychiat., **39**:655-686, (Apr.) 1938.
8. Arkin, A.: Clinical and pathological study of periarteritis nodosa; report of five cases, one histologically healed. Am. J. Path., **6**:401-426, (July) 1930.
9. Harris, A. W., Lynch, G. W., and O'Hare, J. P.: Periarteritis nodosa. Arch. Int. Med., **63**:1163-1182, (June) 1939.
10. Mowrey, F. H., and Lundberg, E. A.: Clinical manifestations of essential polyangiitis (periarteritis nodosa), with emphasis on the hepatic manifestations. Ann. Int. Med., **40**:1145-1164, (June) 1954.

State University of Iowa College of Medicine

Clinical Pathologic Conference

November 10, 1954

SUMMARY OF CLINICAL FINDINGS

THE PATIENT WHOSE case is to be discussed, a white mail clerk born in 1890, was first admitted to University Hospitals in July, 1929. There was some question as to whether the history began in 1916, with weakness and clumsiness in the right arm, with remissions and exacerbations, or whether the "weakness of the right side" followed an attack of influenza in 1919. During the latter illness, the patient was in bed for a period of three weeks with high fever, headache and delirium. He was able to return to work, although moderate clumsiness of the right side of his body persisted.

On June 20, 1927, he suddenly became nauseated, lost consciousness, fell backwards and struck his head. He remained unconscious for a period of 15 minutes or more. That same evening, he noticed for the first time that his left leg was not functioning properly. During the next few days, there was rapidly increasing paresis of the right arm and leg, and of the left leg.

On admission here two years later, the findings included a spastic triplegia and diminished perception of proprioceptive sensation in both legs and in the right arm. Laboratory examinations of the blood, urine and spinal fluid were all within normal limits. Therapeutic intravenous typhoid vaccine was started.

The patient was seen again in March, 1949, for sudden onset, approximately one month previously, of sharp pain in the right upper lip, right cheek and eye. This pain was sharp and spasmodic, aggravated by chewing or shaving the upper lip. The patient had continued unable to walk since his evaluation in 1929, but had been able to make a satisfactory living as a peddler, getting about in a motorized wheel chair. Then it was mentioned for the first time that his left arm was weak and clumsy. The patient had been noticing abnormal frequency of urination and occasional bowel incontinence, dating back approx-

imately to 1932. The neurologic examination at this time revealed flaccid paresis of the right arm and shoulder, associated with diffuse atrophy of the pectoral group of muscles; 60 per cent strength in the left arm, with intention tremor on the finger-to-nose test; marked spasticity of both lower extremities; proprioceptive sensory loss in both legs and in the right arm; and barely discernible diminution of pain sensation over the right arm. On this admission, he had injection of the right infraorbital nerve with 80 per cent alcohol and 2 per cent novocain. There was immediate cessation of pain in the face, with no return.

The patient was next seen in January, 1953, at which time he had requested help for the "cramps" he was suffering in his lower extremities. These began in the spring of 1952, and consisted of bouts of tonic extension or clonic jerking of the legs on virtually any stimulation to the lower part of the body. These movements were associated with considerable pain. He reported that he had noticed no significant pain in the right side of his face since his injection. A mass had been removed from his right breast in November, 1952; he was not sure of the nature of this tumor, except that it had not been malignant. He had come to the hospital in desperation because the jiggling of his electric wheel chair as it went over rough surfaces threw him into such severe spasms that he was unable to continue the peddling that was his livelihood. The physical examination at this time showed, for the most part, intensification of the previously noted findings. There was now complete loss of proprioception from approximately the second thoracic dermatome downward. There was still little involvement of pain sensation, and touch perception was intact throughout. On this occasion it was noticed that there were coarse rales and wheezes throughout the lung fields, with some increased resonance. At this time his only usable extremity was the left arm; there was complete loss of bowel control and almost complete loss of urinary sphincter control. Blood and urine examinations and gastric analysis were all within normal limits. On January 15, 1953, a lumbar laminectomy was carried out, with ventral rhizotomy of L1 to S3 on the right and L1 to S2 on the left. This procedure, along with a few days of intensive physical therapy, afforded sufficient relief of his spasms to permit his going back to work in February, 1953.

He was readmitted June 3, 1953, for recurrence of the painful spasms, now involving the adductor muscles of the legs, and recurring urinary bladder infections. Because of the painful spasms and because only his left upper extremity was usable, the patient was forced to lie on his right side most of the time, was unable to turn himself from side to side, and was beginning to have decubiti over the right ischial tuberosity and sacrum. On June 12, 1953, through a laminectomy at D10 through L1, a segment of the spinal cord was excised below the tenth thoracic dermatome. Cystometrograms were carried out before and after this procedure. It was then possible for the patient to empty his bladder by manual pressure suprapubically; he had very satisfactory relief from pain; and the now flaccid lower extremities were much more easily cared for.

The patient left the hospital July 2 and got along reasonably well for a few weeks. He was again admitted September 9, 1953, because of severe, recurring, sharp lower abdominal pains. These pains had their onset sometime in August and gradually became more and more frequent and severe, so as to interfere with his sleeping and eating. They were very incompletely controlled with codeine. At that time he was spiking a fever and had many white blood cells in his urine. An EKG was within normal limits. Blood pressure was 130/90 mm. Hg. He was given intravenous fluids, Gantrisin and Terramycin, with prompt cessation of the fever and partial relief of the abdominal pain. On September 18, nausea was noted and he vomited once. The next day, he began having difficulty breathing; examination revealed mild cyanosis, a respiratory rate of 38 per minute, moist sibilant rales over both lung fields and a pulse rate of 122 per minute; and the Decholin circulation time was 15 seconds, arm to tongue. With aminophylline 3¾ grains intravenously, there was some subjective improvement and a slowing of the respiratory rate to 25 per minute. In spite of various measures, some areas of pulmonary dullness appeared. The right lung field became entirely consolidated, and the heart was displaced to that side on the morning of September 21. This situation was accompanied by a severe fall in blood pressure, and the patient died a few hours later.

CLINICAL DISCUSSION

Dr. Robert A. Utterback, Neurology: Our case today is that of a man who seemed to suffer from a progressively debilitating disease of the central nervous system throughout at least the last 35 years of his life. The question that we faced in dealing with him clinically and the question that perhaps still is disputable is whether his was actually a steadily progressive disease, or whether he had remissions and exacerbations with many years of remission leading up to his last admission, or whether there were several etiologic factors at work. One of the interesting things, I think, —and it was even more apparent in looking over the actual history than it was in looking over this protocol—was the great variations among the histories obtained by the different interviewers. It was quite apparent either that the patient became mixed up as regards the sequence of events or that successive history-takers colored the facts here and there to fit some pattern. It is also in-

teresting that an apparently unrelated intercurrent illness occurred in this man and possibly caused some complications in our thinking. I do not see any point in going through the protocol in detail with you, and perhaps the best place to start at this time is with Dr. Meyers, who carried out the first surgical procedure, in 1953.

Dr. H. Russell Meyers, Neurosurgery: The problem posed for the neurosurgeon was twofold: (1) that having to do with spasms and flexor synergies in the lower extremities; and (2) that having to do with pain attending these spasms.

This patient had for a long time been confined to a wheel chair, in which he was able to get about, to carry on as a newspaper peddler and, in general, to maintain his social and economic independence. He was a man of courage and a strong desire to maintain his integrity, despite severe limitations. One of our responsibilities was to help him preserve his independence, in full recognition of the fact that for practical purposes he had the use of only one limb, the left arm. The protocol indicates that the patient had motor spasms of the legs. These were severe enough to rack him from crown to toe and sometimes catapulted him to the ground. We reasoned that if we could control the muscular contractions, the pain might automatically disappear. Hence, in our first effort we performed anterior root resection (rhizotomy) from L1 to S3, inclusive, on the right side, and L1 to S2, inclusive, on the left. It was calculated that by so doing we could preserve such afferent impulses as were yet conducted in the patient's cord, despite the presence of diffuse degenerative disease. The operation was also intended to leave him some degree of innervation to the bladder and rectum by way of the nervus erigentes.

The operation failed to accomplish all that was expected of it. Some muscular paroxysms persisted, and the pain was very little alleviated.

Realizing that there was very little to be lost in a physiological way, and having informed the patient fully of our plans for the operation and the results we hoped to achieve through it, we next carried out a cordectomy, beginning at about the D10 vertebral segment—that is, just above the lumbosacral enlargement of the cord and extending down to and including the conus medullaris. This operation gave welcome relief as regards both motor spasms and pain. The patient was able to sit up in his wheel chair and to move himself about, much as he had done prior to operation. Unfortunately, the progressive, degenerative character of his spinal cord disease ultimately led to the complications which resulted in his death.

To return to a matter of considerable physiological interest in relation to the persistence of muscle spasms following anterior rhizotomy, I should like to emphasize that the traditional textbook descriptions of segments of the nervous system innervating a given muscle are no more than the merest approximations. Thus, when one reads that the motoneuron field of the quadriceps muscles of the thigh is made up of the anterior horn cells of the third and fourth lumbar segments of the cord, he should take the statement merely as pointing up the most considerable bulk of anterior horn cells so involved. Long ago, Professor Sherrington showed that the motoneuron field of any muscle extends for many segments above and below those ordinarily identified as responsible. This being so, it should not be surprising that the elimination of impulses passing out over the third and fourth anterior roots did not completely paralyze the quadriceps muscles. And what is applicable in principle to the quadriceps muscles applies also to other muscles and muscle groups. Almost certainly, the preserved anterior roots emerging above and below L3 and 4 were the source of persistent impulses producing motor spasms and pain. That these were eliminated after cordectomy is further evidence in support of the principle here discussed.

Dr. Jack Davies, Anatomy: The bladder symptoms in a case like this are of some interest to the clinician, and I will call upon Dr. Bunge to describe some cystometrograms which were made during the illness of the patient.

Dr. Raymond G. Bunge, Urology: All patients who have spinal lesions are very likely to encounter alterations in the physiology of their bladders. Recently—I would say within the last year or two—we have become increasingly aware of changes in other portions of the urinary tract, besides being concerned about the ability of the bladder to empty, and the urethral sphincter to maintain continence. This particular case was of tremendous interest because it was the first opportunity for us to investigate the function of the bladder and the upper urinary tract both before and after a partial cordectomy. A cystometrogram was made by injecting known amounts of water through a catheter into the bladder and then measuring the column of water in a 5 mm. tube as the various increments were increased. It will be noticed preoperatively that when 50 ml. of water is placed in the bladder, there is an approximate reading of 3 cm. of water, and then as the volume is increased, the intracystic pressure rises rather rapidly, thus suggesting a spastic type of bladder. Another cystometrogram, made 19 days postoperatively, shows that the intracystic pressure rises merely a small amount each time 50 ml. of water is added. Postoperatively, the bladder is hypotonic, and I think the significance of this fact will be more readily apparent if Dr. Forbes will review the cystograms.

Dr. Stephen A. Forbes, Radiology: The first sodium iodide cystogram preoperatively showed reflux of the opaque medium into the right ureter at 30 minutes. A film taken at 60 minutes also

showed a trace of the opaque medium in the right ureter. Postoperative examination showed no apparent reflux at any time. A progress examination one week later also showed no ureteral reflux. A film taken during manual pressure on the suprapubic area also showed no reflux in either ureter.

Dr. Bunge: Did you see any stones in the kidneys?

Dr. Forbes: There were at least three small calcific fragments overlying the right renal shadow which might have been stones. The collecting systems were entirely normal, showing no evidence of hydronephrosis.

Dr. Bunge: Just one word about delayed cystography. The technic was discovered quite accidentally by Dr. Stewart, who is a graduate of this school and a urologist in California. In children with suspected urological disease, it is good practice to obtain a cystogram for the detection of ureteral reflux. In one particular instance, Stewart filled the bladder with skiodan and the X-ray technician failed to take the cystogram until an hour later. Ureteral reflux was present in that film, although previous examinations taken immediately after filling the bladder had failed to reveal it. We have employed that procedure extensively because it affords us an opportunity to view both the urinary bladder and the ureteral physiology on the time continuum, and many times we have discovered ureteral reflux which was not evident on the original or immediate cystogram. The significance of ureteral reflux is fairly obvious. It permits egress of infected urine to the poorly protected kidney, serves as an antagonist to the peristaltic action, and may eventually end in the exhaustion and dilatation of the kidney. In any case with ureteral reflux, we are disturbed, for 70 per cent of cases with spinal cord lesions develop urinary complications, and many of them die of uremia. This particular case under discussion today gives us reason to suppose that in certain selected instances we may have a way of dealing with ureteral reflux and preventing it. Following partial cordectomy or rhizotomy, the bladder will be hypotonic, it will no longer need an indwelling urethral catheter and a source of infection will be eliminated. If such a bladder is produced, it must be determined whether manual pressure exerted suprapubically produces ureteral reflux. In this patient, one of the films, taken while pressure was being applied at that point, showed that we need not fear such a possibility.

One other thing of interest is the production of kidney stones. You will notice in the protocol that the patient was forced to lie on his right side most of the time. The stones these people form are those of "recumbency" and are very likely to occur during the first six weeks of the recumbent period, when the urinary calcium is high. After six weeks have passed, the urinary calcium tends to go below normal, and the danger of urolithiasis is lessened. In conclusion, I might briefly point out some measures and precautions to be observed when one is caring for patients with spinal cord lesions: (1) over-distension of the bladder must be prevented at all costs; (2) an indwelling urethral catheter in the male must be taped to the abdomen so as to prevent pressure at the penal-scrotal junction, where fistulae very often form; (3) during the first six weeks of recumbency, fluids should be forced, and the patient should be turned frequently to prevent the formation of calculi; (4) frequent X-ray examinations and cystometrograms should be done, and if ureteral reflux appears, surgical correction may be indicated; and (5) urinary tract infection should be combatted with appropriate antibiotic or sulfonamide therapy.

Dr. Henry E. Hamilton, Medicine: What was the clinical diagnosis?

Dr. Utterback: When the patient was originally seen here, in 1927, he was given a diagnosis of encephalomyelitis. The question at that time was whether his illness was a sequel or a continuation of the one he had had in 1918 and 1919. When he was seen again in 1949, the diagnosis was multiple sclerosis. When I saw him in 1953, I felt the diagnosis was either multiple sclerosis or syringomyelia. It was difficult to fit this long history together, as I am sure you have found out. Perhaps when we have finished with the pathologic findings, we might spend a little more time considering in retrospect how these various symptoms came about, insofar as is apparent from the pathologic findings. I think it was almost impossible for us to be sure whether this patient had multiple sclerosis, with multiple plaques in the spinal cord, whether he had syringomyelic cavities, or whether he had residuals of an old infectious myelitis. There was little historical evidence of encephalitis, and there was no clinical evidence of involvement of the cerebrum or cerebellum. So we had a condition with the lesions all limited to the spinal cord.

Dr. Emory D. Warner, Pathology: I shall run through the findings in this particular case rather rapidly and leave some time for discussion of the demyelinating diseases, of which this is one type. As regards the cause of the patient's death, I should observe that he had massive collapse of the right upper- and mid-lung lobes, with considerable shift of the mediastinum. He had a small amount of patchy, early pneumonia, but not much. The bronchi—particularly in the collapsed lobes, but generalized to a minor extent—contained very sticky mucoid material.

In a section of collapsed lung, one could see the alveolar walls stuck together. There was some fibrosis of lung tissue. The non-collapsed left lung and the non-collapsed lower lobe of the right lung were both over-distended and emphysematous.

They, too, showed some fibrosis of the alveolar walls. But the conspicuous finding was the massive collapse.

The patient did have a bilateral pyelonephritis of moderate degree. In a section of kidney one could see a fairly extensive pathologic area, with purulent exudate in some of the tubules and with destruction of renal substance in multiple areas. There was extensive, patchy atrophy of the tubules and complete loss of many of them, but damage, according to postmortem blood chemistry, was not extreme enough to produce a significant renal deficiency. The pelves and ureters, incidentally, were not significantly dilated. One stone was faceted in the lower calyx of the right kidney, and there were a number of small stones in the urinary bladder, several of which were faceted and presumably had been passed from the renal pelvis.

The bladder was not particularly dilated at the time of autopsy. It was rather thin and flabby. Aside from the extreme wasting, particularly in the lower extremities, those were the main findings outside of the central nervous system.

There was widespread, patchy change in the spinal cord, with demyelination of the fiber tracts in patchy fashion, and there was also some involvement of gray matter in the cord, with gliosis and areas of replacement of nerve tissue. There was no cystic degeneration in any of the sections. A section of the cord showed foci of degenerative change in the pyramidal tracts. There was enlargement of the gray matter, rather extensive gliosis, and a complete degeneration of the lateral columns next to the midline.

For the most part, the lesions were old and quiescent, with no evidence of fresh ones. In some areas, however, there were fresh lesions. One section showed an area in which there was the perivascular infiltration which goes along with multiple sclerosis and the other demyelinating diseases in the active phase. There was vacuolation, with degeneration of the nerve tissues, particularly myelin, and a great number of large mononuclear phagocytes, foam cells, taking up the degenerating myelin.

The brain was nearly normal. A brain section showed some rarefaction and loss of substance along the ventricle in the posterior ventricular horn, but practically speaking, the brain was uninvolved in this case. It was essentially a patchy, degenerative change, mainly of the spinal cord, involving myelin for the most part, but also gray matter.

SUMMARY OF NECROPSY FINDINGS

At necropsy, the body was that of a wasted, poorly nourished, white male, showing marked atrophy of musculature of the lower extremities and the right upper extremity. There was a healed amputation of the third, fourth and fifth right toes. The heart showed a mild fatty infiltration. The lungs showed severe atelectasis of the right upper and middle lobes, with emphysema and fibrosis of the remaining pulmonary tissue. Congestion of all pulmonary vessels was marked, and the lower lobes showed alveoli distended with pink-staining edema fluid. The kidneys showed a moderately severe pyelonephritis. The bladder showed some submucosal inflammation. There was a mild aortic sclerosis.

There was a well-healed 25 cm. scar over the spine from T10 to L3. The spinal cord showed resection of cord substance at a distance of 32 cm. from the uper end. Distal to this, there was a dense hyaline-like material, containing cystic spaces and a central hemorrhagic area. Microscopic sections of the hyalin material showed no recognizable spinal cord tissue.

Sections of the spinal cord showed extensive degeneration of myelin and of gray matter in multiple areas. Most of the changes appeared old, but in places, active lesions with low-grade inflammatory reaction were present. Sections of brain showed remarkably little involvement. We observed one area of para-ventricular degeneration in the occipital pole.

NECROPSY DIAGNOSIS

Multiple sclerosis, with extensive spinal-cord and minimal cerebral involvement.

Postoperative distal cordectomy.

Pulmonary collapse, right upper and middle lobes.

Pulmonary emphysema and fibrosis.

Calculi in urinary bladder and right kidney pelvis.

Pyelonephritis, bilateral, moderately severe.

Adiposity of heart.

Arteriosclerosis, mild.

Emaciation and muscle atrophy.

Healed amputated third, fourth and fifth, right, toes.

Dr. Davies: Are there any questions you would like to ask Dr. Warner about the pathologic findings? If not, I shall ask Dr. Sahs to discuss the demyelinating diseases, their geographic distribution and whatever therapy may be of value in these cases.

Dr. Adolph L. Sahs, Neurology: Various theories regarding infections, metabolic irregularities, vascular diseases and allergies have been propounded in an effort to explain this group of disorders. Myelin suffers severely, for the most part, but the vascular system is also involved, and sometimes the ganglion cells are also affected. Because some of these diseases overlap, it is not always possible to differentiate them clinically. One type is called *acute disseminated encephalomyelitis.* This is an acute condition which is sometimes related to some fairly specific etiologic agent, such as a vaccination against smallpox or

an inoculation against rabies. These may be allergic conditions. The response is rather overwhelming in the direction of inflammatory reaction and severe demyelinization. The main reason for considering this an allergic type of response is the close resemblance of these pathologic findings to those observed in experimental allergic encephalomyelitis.

The second group is called *acute necrotizing hemorrhagic encephalomyelitis.* This condition usually has a fulminating clinical picture, and large areas of the brain and spinal cord are destroyed almost to the point of liquefaction. It seems, at least, that the vascular system bears the brunt of the damage under these conditions, for there are hemorrhages around blood vessels, there is necrosis of brain and spinal cord tissue around blood vessels, and there is intense cellular infiltration.

The third group, *classic multiple sclerosis,* is a disorder in which there are patchy areas of loss of myelin, with relative sparing of the axis cylinders. It seems as though, for some reason, insulation is taken off the wires which run through these plaques. Just beyond, one may see normal or fairly good-looking nerve structures. Hence, the term *patchy demyelinization.* As Dr. Warner has shown you, in practically every case of so-called multiple sclerosis, one can see some evidence of activity. Perhaps around the edge of the plaque or in a different area, one can often see evidence of disease which is relatively more acute and which seems to be affecting the vascular system, in part at least.

The fourth one that I shall list is called *neuromyelitis optica of Devic.* It is a rather explosive type of disease which affects the optic nerves and the spinal cord. We have had several instances of neuromyelitis optica on the ward during this present year.

The fifth group is known as *diffuse cerebral sclerosis of Schilder, or Schilder's disease.* It is a very serious demyelinizing disease which seems to involve large amounts of white matter throughout the hemispheres of the brain. The sixth group includes other types which are rarely seen and which I need not mention here.

Multiple sclerosis is a common neurologic disease. It is estimated that there are from 200,000 to 300,000 instances of this disorder in the country at the present time. It has a rather unusual geographic distribution, in that there are more patients in the northern and temperate zones than there are in the southern. It is particularly prevalent in the British Isles, in Scandinavia and in Switzerland. Dr. Paul Bussey, who recently completed a trip to South America, told me that multiple sclerosis is extremely rare on that continent. It is infrequently seen in the Negro. Research in multiple sclerosis has proceeded at an accelerated pace during the past five years, largely due to the efforts of the National Multiple Sclerosis Society.

The formidable problem in finding the cause of demyelinization has been approached along a number of lines. Some recent developments have come in the field of biochemistry. The problem of the structure of myelin and its changes have been studied photographically, through diffraction patterns produced by the passage of X-rays through nervous tissue, for example. A recent theory which may offer a lead is that changes may be taking place in the oligodendrocyte, the governing cell which takes care of the myelin and assists in its metabolism. Thus, attention is now being directed toward the oligodendrocyte as a possible link in the cause of some of the demyelinizing diseases.

The various therapies have been directed along the lines of the several possible etiologic factors. It has been popular, on occasions, to send patients with this disease to a southern climate. The allergic theory has some merit—hence the utilization of histamine and similar substances. Possible metabolic or nutritional etiologic factors have led to the use of vitamins and other preparations. The vascular idea, as propounded by Putnam and others, has led to certain attempts at treatment of possible vascular spasm as the cause of the disease. The idea that disturbance of diet is responsible was proposed by Swank. He is of the opinion that the incidence of multiple sclerosis is higher in those people who consume considerable amounts of certain types of fats than in those with a low fat intake. Superficially, one might conclude that such a difference might account for the lower incidence in warmer countries, but certainly that would be an assumption that might not be justified at this time. Needless to say, investigation is proceeding in many areas, and it is hoped that more light will be shed on this condition in the not too distant future. The metabolic approach to the problem of multiple sclerosis seems to me to offer the best possibilities at this time.

Dr. William B. Bean, Medicine: In November, 1952, we are told, the patient under consideration had something removed from his right breast. I do not think it is commonly known, or it certainly wasn't until after World War II, that about 15 to 25 per cent of paraplegics, particularly young men who have had injuries, develop gynecomastia. What the significance of that fact may be, or what the mechanism is, I do not know. Dr. Warner says that this man's adrenals and testicles both were perfectly normal histologically and grossly. Some of the speculation as to a possible mechanism has involved testicular atrophy as well as adrenal hypertrophy.

Dr. Davies: I can say from my somewhat scant clinical experience, that in England multiple sclerosis, which we call disseminated sclerosis, is the most common debilitating nervous disease.

As a student, I saw many cases of it, and very much fewer in this country. Before we throw the meeting open to discussion, Dr. Utterback would like to sum up this case.

Dr. Utterback: I am not sure that I can do much summing up, but there are several little points that I think will bear my elaborating upon. In the first place, I am sure you must be puzzled, as I was, by the history of the patient's illness in June, 1927. Unfortunately, we have no medical record of what happened at that time. In retrospect, I suppose that some sort of vascular accident appeared to complicate the picture. It may have been associated with the inflammatory process that goes on in multiple sclerosis. In any event, this episode in 1927 called attention to the fact that he was in an exacerbation and that he was having increasing difficulty.

Perhaps the abdominal pains might be discussed a little more. I think Dr. Meyers implied the reason for them. Painful spasms in the lower extremities were the chief complaint responsible for this man's admission here in 1953, and these contractions were of course fairly well relieved by the rhizotomy. However, muscular "cramps," or sustained contractions, of exactly similar nature began later to involve the abdominal muscles, and I feel it was this mechanism that was responsible for his abdominal pain. His rectus muscles were definitely in spasm. The masses which we felt in his colon were fecal masses, accumulated as a result of the intractable constipation. He had no voluntary sphincter control.

I would like to make one other little comment. It is popularly said that nothing can be done for the patient with multiple sclerosis—that he is an impossible therapeutic problem. Indeed, as of the present time, we have nothing that will cure multiple sclerosis, and we have nothing that will appreciably alter the course of the disease, but it seems to me this does not alter the fact that the physician has a responsibility to treat the symptoms as they appear. This man, unfortunately, gained only a few more months of active life from all the therapeutic exercises we carried out here, but even so, I do not feel that we wasted our time. Even if the patient can be relieved of pain for only a short time, or if he can be offered only a few more months of active life, it is well worth our time to try.

Dr. Warner: I should like to ask Dr. Sahs to comment on that influenza note in the record.

Dr. Sahs: During the epidemic of influenza in 1918 and 1919, there appeared a group of conditions which were undoubtedly those of encephalitis, which appeared and persisted for many years after 1918. In fact, we saw many of them as late as 1927, 1928 and 1929. Developing probably as a result of an acute viral infection of Von Economo, this disorder produced Parkinsonism as its predominant clinical feature.

Dr. Davies: I seem to remember that there are three classical symptoms of multiple sclerosis, one of which is intention tremor, the second is scanning speech, and the third, possibly, is nystagmus. I should like to ask Dr. Sahs whether those symptoms really do belong to this disease and whether they were found in this patient.

Dr. Sahs: That is the classic triad of Charcot. We tend to get away from the so-called Charcot triad and to concentrate on other features which are more likely to be suggestive of, or diagnostic of, multiple sclerosis. Those other signs and symptoms include some disorder of the optic nerve, particularly a scotoma and an optic atrophy. A second common symptom is involvement of the long pyramidal tracts, with spasticity. The third sign that we see frequently in this disease is involvement of the proprioceptive system, with loss of vibratory sensation, two-point discrimination and position sense, particularly in the legs. I think that that combination of symptoms and signs is seen much more frequently than is the classic triad of Charcot.

Dr. George C. Albright, Iowa City: Will you comment on the remissions?

Dr. Sahs: Remissions are rather variable and are quite unpredictable. Sometimes an individual will have only one attack of optic neuritis or retrobulbar neuritis, and that may be the end of his symptoms so far as possible multiple sclerosis is concerned. I have no good explanation for the remissions and exacerbations which take place in classic multiple sclerosis. The rapid shifting of symptoms is very difficult to understand on the basis of any permanent demyelinizing process, but perhaps is much more easily understood in the light of some reversible vascular or metabolic condition.

DON'T RUB SNOW ON FROSTBITE

The time-honored custom of rubbing frostbite with snow is outdated, according to Drs. W. O. Kleitsch and E. K. Connors, of the Creighton University School of Medicine.* Today's accepted treatment consists of rapid thawing of the frozen areas by baths somewhat above body temperature, they say.

After thawing has taken place, they recommend drying the extremity and spraying it with an aqueous solution of the antibacterial agent Furacin (Eaton), which they describe as having "a therapeutic spectrum peculiarly effective in the control of skin organisms." Greasy or oily applications should be avoided, they advise, as they may lead to maceration and infection.

After necrotic tissue has been removed and defects have been closed by appropriate trimming of the skin flaps, Furacin gauze dressings are applied. The article reports on several cases in which this therapy was employed with excellent results.

* POSTGRADUATE MEDICINE, 16:191, (Sept.) 1954.

Editorials

REGIONAL CONCEPT IN CONTINUATION EDUCATION

It is interesting to note that an article in the January issue of THE JOURNAL OF MEDICAL EDUCATION, written by Dr. William F. Norwood, is in accord with some proposals which were first made to the dean of the S.U.I. College of Medicine by the State Society's Committee on Rural Health and are now being implemented by the Committee on Medical Education and Hospitals, in cooperation with the College. The idea involves the establishment of an extension service of the College of Medicine, through which faculty members can be made available on request to physicians in areas throughout the state.

Tentative plans were formulated and discussed at a meeting of the Committee on Medical Education and Hospitals on December 22, to which representatives of the College of Medicine, the Council of the State Medical Society, the Iowa Academy of General Practice, the State Department of Health and the U. S. Veterans Administration were invited. The proposals which were made and the conclusions which were arrived at are reported in some detail under "Minutes of State Society Officers and Committees" in this issue of the JOURNAL.

Dr. Norwood's article reports on grants made to 18 medical schools over a seven-year period by the W. K. Kellogg Foundation, a resource of which it has been suggested that the Iowa State Medical Society and the S.U.I. College of Medicine attempt to avail themselves. Of those 18 schools, 11 indicated that their postdoctoral education is regional or decentralized in character. Attendance at their postgraduate courses has increased about 85 per cent over the period, Dr. Norwood says, and, according to his statements, the medical educators interviewed were overwhelmingly of the opinion that qualified clinicians are more desirable than are basic science instructors in such teaching programs.

Although the idea of extension service certainly is not new, its application to postgraduate medical education is still somewhat embryonic. It would seem, however, to offer a stimulating challenge to the faculty members of the College of Medicine. As teachers, they must often wonder what type of medicine their onetime students are practicing. If they participate in regional postgraduate teaching, they will have an opportunity to see at first hand how medical care is provided in different areas of the state, and they will be called upon to instill even more of their science and art into men already in practice. To the doctors who take advantage of the program, the regional arrangement offers an opportunity to come close to a fount of knowledge without having to leave their own communities.

The idea seems a good one, and we hope it may be tried in Iowa before long.

A DISAPPOINTMENT

At the risk of seeming ungracious, but in the hope of securing some improvement, we are impelled to say that the "Medic" television series has been quite uneven and, in numerous instances, has fallen short of what was expected. A few of the newspaper critics have whispered "soap opera," and we think that they have had considerable justification.

The topics dealt with in programs intended for the public ought certainly to be medical. Smith, Kline and French, in the "March of Medicine," have observed that maxim faithfully, and, it seems, have done the profession's public relations a great deal of good. But whether the Dow Company and "Medic" have made a similar contribution is seriously in doubt. Perhaps largely because an effort has been made to keep the focus upon the patient, the problems have been sociological, and the physicians, in many instances, have been represented as playing minor and incidental roles. And, incidentally, the formulae regarding "case in point" and "clue" put into the mouth of Conrad Steiner have been so far-fetched as to seem silly.

We could cite no fewer than five or six regrettable instances, but for the sake of conserving space we shall confine ourselves almost entirely to an analysis of the program on geriatrics aired on December 27. The doctor, in that show, had nothing much professionally to do other than to give a physical examination and prescribe aspirin, or something of the sort. The solution which he was represented as helping the family to discover for the unhappiness of the sixty-odd year old woman was even simpler. She was moved back into her old home and into her old life without the slightest difficulty, and there, presumably, she watered her geraniums and lived happily for ever after.

Widowed mothers whom young people take into their homes aren't usually capable, either physically or mentally, of living by themselves. Or, if an occasional one of them is, her son, or son-in-law, isn't usually well enough situated to have permitted her to keep her old house unoccupied and ready on the off chance that she'd want to move back there, or besides caring for his wife and children, to support her in that second establishment. Moreover, from the interior that television viewers were shown of the son's house, and from the lines

which suggested that the son wasn't particularly secure in his job, there was reason to suppose that the instance being shown was not an exceptional one. But just as in the program on which the unmarried father was represented as coming back from parts unknown to hold the poor girl's hand and promise he'd marry her, the "Medic" scriptwriters had sacrificed probability for the sake of such an ending as could be expected of "City Hospital," "The Loretta Young Show" or "Life Can Be Beautiful!"

Although the "Medic" programs undoubtedly attract large audiences, they are inconsistent with the scientific attitude, the responsibility and the dignity of the medical profession. Therefore, the Los Angeles County Medical Society which sponsors them should exert its influence, first, to confine the series to subject matter about which physicians have greatest competence and, second, to make it entirely deserving of respect.

CHANGED PROCEDURE IN V-D CONTROL

Our cerebral cortices are strained to capacity by the rapid tempo of everyday life. We are almost exclusively concerned with the problems of the day. We take care of patients, sit on committees, fight today's battles against disease and distasteful social trends, and lie down exhausted in our beds. We rarely look forward or backward. Yet it is indeed gratifying to glance, occasionally, down the road we have traveled.

In January, Broadlawns General Hospital, Des Moines, made a change that may come to be a landmark. For a six-months trial period, venereal disease victims are to be seen in the general practice clinic. Records of these patients are no longer to be segregated, and the arrangement will have the added advantage of educating general practitioners to a greater familiarity with this type of case. Dr. Leo Pearlman, who has directed the V-D clinic, will still be available to consult with them and to assist in orienting them to this service. The ultimate goal is to have all doctors familiar with the care and treatment, and in as much as new drugs have made therapy so easy, it should not be difficult to interest the general practitioner in handling this type of case in his own practice to a greater extent than previously.

One of the very important essentials in venereal disease control is the work of the epidemiologist. As patients are shifted to the general practice clinic, there will be no change in the effectiveness of the epidemiologist, for he will be available for consultation on all active cases.

Dr. Pearlman has conducted the work of the Broadlawns V-D clinic very ably, and he is to be complimented upon it. The job, unfortunately, is by no means finished, but with the advent of new methods of treatment and better control, fewer patients are being seen at the hospital. The lethal weapon in the eradication of syphilis and gonorrhea has been the antibiotic drugs. Through them, the acutely contaminated individual can be rendered non-contagious. The rapid sterilization of the infectious lesion and the compulsory reporting of every acute case have enabled the State Department of Health to trace the origin of new cases and to stamp out the original source of infection. Old cases of syphilis, of course, will remain with us for years, but if new ones continue to be eradicated quickly, we may some day be able to write an even more significant story, the obituary of the entire group of venereal diseases in Iowa.

The record of the Venereal Disease Clinic at Broadlawns should be recited at this time. Total new cases of primary and secondary syphilis seen at the Clinic varied from 18 in 1938 to 84 in 1946. But in 1953, only three cases were seen during the entire year. During 1954, there were only two new cases, and only one patient was hospitalized for syphilis of any type. Gonorrhea still has considerable morbidity, however. Admissions per year varied from 181 in 1939 to 533 in 1946, then fell to between 152 and 210 for the years 1951 to 1953. Total visits to the clinic for syphilis and gonorrhea fell from 21,120 in 1938 to 2,116 in 1953.

The picture throughout the state has mirrored the Broadlawns experience. Reported cases of primary and secondary syphilis varied from about 425 in 1941 to about 650 in 1947. In 1954 there were no more than 50 new cases reported from the entire state. Cases of gonorrhea fell from 2,095 in 1946 to 656 in 1951.

We may all be proud of the job performed by the doctors and nurses at Broadlawns Hospital with the weapons at hand. We are proud of the State Department of Health for its persistent detective work in stamping out carriers of active disease. Medicine has indeed made tremendous progress. It is disappointing to realize that because of the persistence of late and late-latent cases, the total number of syphilitics has not lessened. We are saddened as we realize that gonorrhea persists when there is no real excuse for its existence. Finally, we are wary, lest in feeling that the diseases are non-existent, we may lapse into complacency and lessen our vigilance.

Let us continue the battle so that the Great Pox will sink into oblivion with Small Pox!

A PHYSICIAN'S SUPPLICATION

For sending us the Prayer of Maimonides, we are indebted to Dr. C. L. Heald, of Sigourney.

Maimonides was a rabbi and physician at Cairo in the twelfth century, A.D. He was retained to attend the monarch Saladin and was so well content with his post that he refused an offer made by King Richard the Lion Hearted to take him to the court at London. As a philosopher, he

wrote voluminously and is said to have influenced Aquinas and Spinoza.

Oh stand by me, my God, in this important task;
Grant me success, for without thy counsel and support
Men can avail but naught.

Inspire me with love for this, my art,
And for thy creatures.

Oh grant that neither greed for gain,
Nor thirst for fame,
Nor vain ambition
May interfere with my activities;
For these, I know, are enemies of liberty and love of men,
And might beguile one in profession
From furthering the welfare of thy creatures.
Oh strengthen me.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Committee on Medical Education and Hospitals

The Committee on Medical Education and Hospitals of the State Society met in the central office on Wednesday, December 22, at noon, with the following members present: Drs. Lee F. Hill, Des Moines; J. H. Randall, Iowa City; and Ralph L. Wicks, Boone. The Committee was host to the following: Drs. Norman B. Nelson, dean of the S.U.I. College of Medicine; W. C. Keettel, chairman of postgraduate-conference work at the University; W. M. Sproul and D. H. Kast, both of Des Moines, representing the Iowa Academy of General Practice; J. H. Sheeler, of the Des Moines Veterans Administration Hospital; Walter L. Bierring and Madelene Donnelly, representing the State Department of Health; Robert B. Stickler, Des Moines, of the Health Education Committee; and Harold J. Peggs, Creston, representing the Council. Miss Mary McCord served as secretary.

Dr. Hill explained that the meeting had been called to integrate postgraduate programs throughout the state. Types of postgraduate education were discussed, and it was decided to make a survey of what was done last year. It was also suggested that the Kellogg Foundation might help Iowa establish a program wherein members of the faculty could visit rural areas on invitation of the doctors there.

Dr. Hill summarized the findings as follows:

1. The State Medical Society should act as a clearing house to coordinate meetings and schedules.

2. Representatives of the various agencies present should meet right after the first of the year to plan programs for at least six months.

3. The State Medical Society should obtain whatever statistics are available on attendance at all national and local meetings. It should also be responsible for publicizing meetings.

4. Although the present methods of postgraduate training have not been particularly successful, they should be continued in the hope that coordination and integration may insure larger attendance.

5. The plan to assign faculty members to hospital staffs, on request, for a two- or three-week period should be explored, and the experiment should be tried on a small scale.

The group also discussed the encroachment of other groups upon the health field and the need for extension service by the College of Medicine.

Dr. Peggs discussed the need for more training in socioeconomic problems and concomitant ethical considerations. It was felt that this matter is a State Society responsibility, and the group voted to recommend that the Committee on Public Relations try to arrange a day of lectures and discussions on those topics for senior medical students.

Committee on Articles of Incorporation and By-Laws

The Committee on Articles of Incorporation and By-Laws met in the central office Wednesday afternoon, January 5, 1955, with the following persons present: Drs. A. B. Phillips, of Des Moines, Paul F. Chesnut, of Winterset, and R. F. Birge, of Des Moines, and Miss Mary McCord, the Committee secretary. Changes proposed by various members of the State Society were discussed, and the Committee approved of them. Miss McCord was directed to ask the Council whether it approved the changes, and then to draw up a statement of the changes for future consideration.

FORENSIC MEDICINE

The Seventh Annual Meeting of the American Academy of Forensic Sciences will be held in the Biltmore Hotel, in Los Angeles, on February 17-19, 1955. The Law Department of the AMA has long urged the profession to take an increased interest in medicolegal problems. Attendance at the Academy meetings constitutes a definite step in that direction.

Further information may be obtained by writing Dr. W. J. R. Camp, Secretary, 1853 W. Polk Street, Chicago, or Dr. F. D. Newbarr, 109 Hall of Justice, Los Angeles 12, the chairman of the local committee on arrangements.

FEDERAL MONEY FOR SUI RESEARCH CENTER

Preliminary approval by the U. S. Public Health Service has been given to a federal grant of $366,666.66 for use in building the projected University of Iowa Medical Research Center. This brings to more than $1,250,000 the sum available for construction of the center. The legislature of 1953 appropriated $900,000 of the amount.

The federal grant is thought to be the first under the Hill-Burton Act made available for the creation of research facilities.

Plans and specifications should be ready very shortly, and bids will then be asked for. The building will be located between the main University Hospitals structure and the Medical Laboratories.

BLUE CROSS  BLUE SHIELD

Economics in the Practice of Medicine

In 1954, Blue Shield paid the medical profession $4,192,020.06 for professional services rendered to a membership of 483,338. That figure represents a sizeable increase in payments over prior years, but much remains to be done. Only 19.3 per cent of Iowa's population enjoys Blue Shield protection.

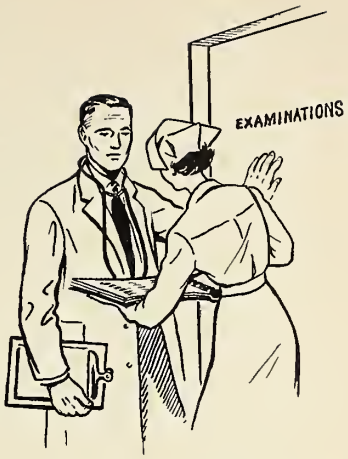
In 1955 and in the years ahead, Blue Shield must meet the challenge by making changes in contract benefits and in fees paid physicians so that the voluntary plans for prepaid health care can meet with even greater public acceptance.

Blue Cross and Blue Shield must be progressive if they are to fulfill the needs and wants of the public. The right of patients to choose their doctors and the right of doctors to receive reasonable payment for each service that they perform are sound principles. But the voluntary way, with free choice of physician, is being threatened by closed panel medicine schemes on the pattern of the Kaiser Permanente plan that has become established on the West Coast. There are indications that they are being promoted in the Mid-West.

In 1954, members of the Blue Shield Physician Relations Department traveled over 50,000 miles in order to talk with doctors and others related to the health field. Many group meetings were held—all for the express purpose of improving service to Iowa people.

The future demands undiminished effort on the part of the medical profession, the hospitals and Blue Cross-Blue Shield. Blue Shield is considered the best public-relations tool of the Iowa State Medical Society, but it can continue in that role only if the men and women who guide it, the physicians of Iowa, initiate wise changes in the coverages so as to make the public continue to think it the best answer to the health needs of individual citizens.

THE DOCTOR'S BUSINESS



Explain Your Fees!

MILLARD K. MILLS*

WATERLOO

Stanley Truman, in his book THE DOCTOR, says that "more splendid physician-patient relationships have been spoiled by a misunderstanding about fees than by any other, or perhaps all other, fields of misunderstanding." Surely, then, it is important for you to make every effort to be sure that your patient understands your fees.

Obviously, the first safeguard against "misunderstanding" is an explanation of the fees being charged. You might begin this way: "Mr. Brown, I've found that most of my patients appreciate an explanation of my fees, so I like to take time to discuss these matters. If at any time you have a question about my fees or about any service that I recommend, I'll do my best to answer it."

Along with the discussion of fees, an explanation of the treatment or surgery required is most appropriate. Above all, use words that your patient can understand, and if you have pictures or anatomical diagrams that will help to clarify your presentation, show them to him. Let him know that you consider him capable of understanding his own case. When he has been paid that implied compliment, he is unlikely to display any dissatisfaction or misunderstanding later.

Many doctors feel that they lack time for discussing these matters with patients. However, lack of time is not a valid excuse, since the fees for elective surgery, obstetrical care or extended treatment are usually large, and the patient has a right to know why he needs the service, what it will consist of, and what it will cost.

THE CHARGE SLIP

For minor services, the charge slip gives the necessary information to the patient. More and more doctors are recognizing its value (1) in providing the patient a breakdown of the fees charged, (2) informing the secretary of the amount to be collected, and (3) informing both the patient and the secretary of the need for another appointment.

It automatically tells the patient that the $11.50, which he may think is rather high for one visit, covers a $3.00 office call, a $4.00 injection and $4.50 worth of laboratory work. If he still thinks the bill is too high, he probably will say so to the secretary, and she can then explain it further and see that he understands completely before he leaves the office.

ITEMIZED STATEMENTS

Even with an explanation and the charge slip, patients sometimes forget by the end of the month how much service was rendered. When he gets a statement reading "For Professional Services . . . $45.00," the patient may think it far too large for the few times he was in your office. But whatever his question, he will be unhappy about not understanding.

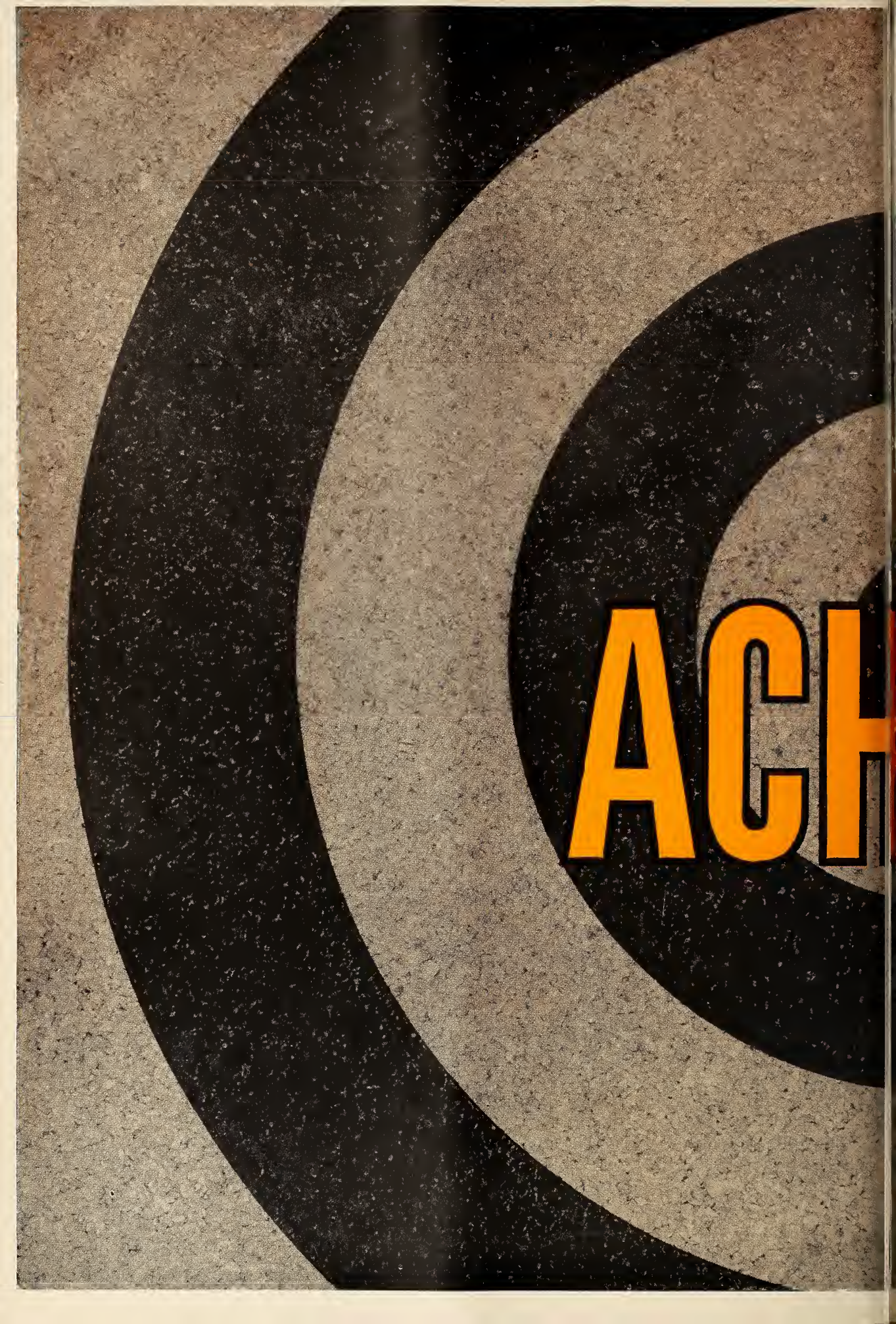
The most practical way to itemize statements is through the use of a posting machine. For the average office, an adequate machine and a year's supply of forms can be obtained for about $1,000. When you consider that without such a machine, the services of a part-time girl are necessary, that the machine is depreciable, that it promotes accuracy, thereby saving your secretary's time, that it eliminates much of the end-of-the-month rush and that it informs your patients of the services rendered, certainly it is a good investment!

If you feel you cannot afford to itemize at this time, then at least have these words printed at the bottom of your statement: "Itemized Statements on Request." Thus you can tell your patients that you are willing to show them breakdowns if they wish to see them.

Finally, the statements should show whether or not the charge includes the amount covered by insurance. Including that information, along with the balance due, will keep the patient happy and will help you get your money.

Let your office procedures answer the patient's questions concerning fees before he asks them. Remember, a proper understanding of your fees will help both your public relations and your collections.

Mr. Mills is general manager of Professional Management.


ACH



ACHROMYCIN has proved effective against:

Pharyngitis
Acute Bronchitis
Tonsillitis
Pertussis
Otitis Media
Scarlet Fever
Osteomyelitis
Epidermal Abscesses
Acute Brucellosis
Pancreatic Fibrosis
Typhus Fever
Sinusitis
Gonorrhea
Bacillary Dysentery
Pneumonia with or without Bacteremia
Bronchopulmonary Infection
Acute Pyelonephritis
Chronic Pyelonephritis
Mixed Bacterial Infections
Soft Tissue Infections
Staphylococcal Septicemia
Pneumonoccal Septicemia
Urogenital Tract Infections
Acute Extraintestinal Amebic Infections
Intestinal Amebic Infections
Subacute Bacterial Endocarditis

ROMYCIN*

HYDROCHLORIDE
Tetracycline HCl *Lederle*

A TRULY BROAD-SPECTRUM ANTIBIOTIC

Clinical research has proved ACHROMYCIN to be effective against more than a score of different infections, including those caused by Gram-positive and Gram-negative bacteria, rickettsia, certain viruses and protozoa.

In addition to its true broad-spectrum activity, ACHROMYCIN provides more rapid diffusion than certain other antibiotics, prompt control of infection, and the distinct advantage of being well tolerated by most persons, young and old alike.

ACHROMYCIN, in its many forms, was accepted by the medical profession in an amazingly short time. Each day more and more prescriptions for ACHROMYCIN are being written when a broad-spectrum antibiotic is indicated.

Lederle LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U.S. PAT. OFF.

Iowa Academy of General Practice

President—Frank D. McCarthy, M.D., Sioux City
President-Elect—William M. Sproul, M.D., Des Moines
Vice President—Charles A. Nicoll, M.D., Panora
Secretary-Treasurer—Donald H. Kast, M.D., 720 Bankers Trust Bldg., Des Moines
Executive Secretary—Mrs. Elizabeth B. Nelson, 3600 Franklin Ave., Des Moines

MEETINGS

Feb. 24, 1955 — Des Moines, Iowa, and Omaha, Nebraska, 5:00-6:00 p.m. Closed circuit television program
Subject: "Management of Streptococcal Infection and Its Complications"

Mar. 28-31, 1955 — Los Angeles, California
Seventh Annual Assembly of the American Academy of General Practice

Apr. 24-27, 1955 — Des Moines, Iowa
Annual Meeting of the Iowa State Medical Society

May 19, 1955 — Des Moines, Iowa
Lederle symposium on "Heart Disease"
Complete program to be announced in the March issue of the JOURNAL

TRENDS IN EDUCATION

Not too many years ago there was lots of discussion, pro and con, about the value of motion pictures in education. It was soon learned that the visual impressions were lasting and that individuals were instructed without too much effort. Later, radio was used to present lectures simultaneously to a large group of people throughout the entire nation.

Combining the visual with the auditory through the medium of television provides the best educational means yet discovered, short of the physical presence of teacher and learner within the same room. The AMA thought the new method valuable enough to be worth an entire day's conference on it, February 5, 1955.

The American Academy of General Practice, at 5:00 p.m. on February 24, 1955, is sponsoring a one-hour scientific program through closed circuit television in 56 cities. The subject is to be "Control of Streptococcal Infection." One hour of formal postgraduate credit will be given to members who register for it and attend. See page 118 in the December, 1954, issue of GP, page 28 of the January, 1955, JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, and the January, 1955, issue of GP.

T-V PROGRAM "MEDIC"

The "Medic" series on T-V will feature the "General Practitioner" on February 21. The technical directors for this program will be under the supervision of Dr. Merlin Newkirk, of South Gate, California, immediate past president of the California Academy of General Practice.

Iowa members will be interested in a detailed account which is to be found on page 125 of the December GP. Patients should be asked to watch for this program.

ANNUAL ASSEMBLY OF THE AAGP

March 28-31, 1955, are the dates and Los Angeles is the place for the seventh annual scientific program of the AAGP, which has been arranged by the Committee on Scientific Assembly under the leadership of Dr. Andrew S. Tomb.

The program is of unusually high quality, and the teachers, masters in their respective fields, have the ability to present their subjects in an excellent manner. It should be considered the duty of each member to attend not only the formal lectures but the business sessions of the Congress of Delegates, as well. Those latter start on March 26, two days in advance of the formal opening of the Assembly. Only if there is a large attendance at the business sessions, can the magnitude of the organization be understood and felt.

Formal credit is given for attendance at the scientific sessions.

Plans for the trip should have been made by this time. However, it is not too late for members to send for room reservations and to make plans for attending. Many, no doubt, have long promised their families a trip to California. Now is the time to make those dreams come true and to get some formal credit in addition.

DOCTORS' HELP IS NEEDED

The workshop on work-simplification procedures, in Ames on June 14, 15 and 16, 1955, at which representatives from towns throughout Iowa are to be trained as homemaker consultants, is the first step in the American Heart Association's Iowa program for cardiac house-

wives.* The program has been successful in hundreds of communities in several other states.

The first need is the training of a corps of instructors. Physicians can help to create interest in the project in their local Heart Committees or county Tuberculosis and Health Associations, and can urge them to select and sponsor trainees. Individuals selected to take the course must have backgrounds in either home economics or nursing. Doctors will frequently be asked whether or not they can use the services of such workers.

The doctors' participation in the program is, of course, essential. As a matter of fact, the plan can be successful only through the continued cooperation of the physicians and the Work Simplification Unit. All diagnoses, all treatment and all prescriptions for the amount of exertion to be permitted to the patient must remain the responsibility of the doctor alone.

After the requisite decisions have been made on matters of those sorts, the homemaker consultant can teach the cardiac housewife how to develop new work habits which may save her as much as 75 per cent of her walking and 60 per cent of her reaching while performing household tasks. The emphasis will be on improved use of the body in ways that conserve energy through correct methods of standing, sitting, climbing stairs, etc., and on simple principles of arranging the work area of the home, rather than on the purchase or rental of elaborate equipment.

It is well to note that the work simplification program need not be restricted to the cardiac housewife. It can be applied as well to those whose physical ability has been limited by any other disease. Indeed, the principles of work-saving can be utilized advantageously by healthy housewives.

The names and topics of the visiting lecturers and State College faculty members who are to participate in the short course at Ames will be announced in a subsequent issue of the JOURNAL.

HEART CONFERENCE IN DES MOINES

Herman K. Hellerstein, M.D., associate professor of medicine at Western Reserve University and director of the Cleveland Work Classification Center, will be the featured speaker at the Fourth Annual February Heart Conference to be held at the Hotel Savery, in Des Moines, on February 9.

The Conference will be conducted around the theme "Your Job and Your Heart," and is being sponsored by the Heart Committee of the Polk County Tuberculosis and Health Association, the Iowa Heart Association, and the Division of Gerontology, Heart and Chronic Diseases of the Iowa State Department of Health.

Dr. Hellerstein will present a review of experiences in the Cleveland Work Classification Center and other metropolitan areas under the title "Putting Sick Hearts to Work."

Other topics to be discussed during the one-day Conference include principal diseases of the heart affecting a person's work-capacity, the problems related to the employment of cardiacs from the standpoint of the industrial physician and management, the position of the cardiac in the labor force, and the effect of heart disease on a person's insurability.

Registration will begin at 9 a.m. There will be no registration fee.

SUI POSTGRADUATE COURSES

Feb. 25 and 26	Obstetrics and Gynecology. This one and a half day conference is designed for the general practitioner, and will emphasize obstetrical analgesia and anesthesia. One session will be devoted to practical gynecologic problems, such as abortion. There will be one guest speaker. Fee: $15.
Mar. 18 and 19	Urology for the General Practitioner. This one and a half day conference will consist of a series of papers and panel discussions by the staff of the Urology Department and two guest speakers. Some of the subjects to be covered are: infertility, injuries to the genitalia in the male, benign hypertrophy of the prostate, carcinoma of the prostate, and urologic problems in children. Fee: $15.
April 6	Neurology for the Practitioner. Concepts of commonly encountered diseases of the nervous system will be outlined, and therapy will be stressed. Among the topics to be discussed are: cerebrovascular disease, convulsive seizures, meningitis, encephalitis, and acute trauma to the brain and spinal cord. There is to be one guest speaker, and there will be time for informal discussion. Fee: $10.

COMMUNITY HEALTH WEEK, MARCH 21-27

Junior Chamber of Commerce chapters, in 1955, are sponsoring Community Health Week, March 21-27, in cooperation with the National Health Council.

The week's program potentially can enlist 180,000 young business men in 2,800 communities in an intensive effort to "Know Your Community Health Resources," and, for that reason, medical societies are being urged to lend their support whenever asked.

SIOUX VALLEY MEETING AT SIOUX FALLS

The annual meeting of the Sioux Valley Medical Society will be held at the Cataract Hotel, in Sioux Falls, South Dakota, on February 23, 24 and 25, 1955. The first session, at 7:00 p.m., on Tuesday, is intended primarily for general practitioners, and will be followed by a "smoker." Members of AAGP can earn ten credits by attending all of the sessions.

* J. Iowa M. Soc., 45:31, (Jan.) 1955.

President's Page

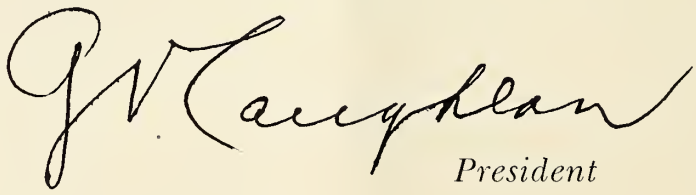
The difference of opinion involving the practice of medicine by hospitals has not been resolved. It is to be regretted that a great profession and an association of institutions for the care of the sick should be unable to get together and reach a satisfactory settlement.

The radiologists and pathologists have assured all concerned that, if their plan is adopted, the cost of services in radiology and pathology will not be increased to the patient, nor will the income of any hospital be decreased. Such a statement should be included in every contract tendered the hospitals by the radiologists and the pathologists. In addition, there should be a constant endeavor to increase the efficiency of service provided by these two departments of the hospital.

The Iowa State Medical Society, through its House of Delegates, has unanimously resolved to effect the change in operation of these special departments of the hospitals.

It would seem wise for the Iowa Hospital Association to join with the Iowa State Medical Society in approving the development of contracts at the local level for the operation of radiology and pathology in the hospitals.

United, these two great organizations can go forward together in advancing better care for their sick patients. Disagreement, if continued, can only result in differences affecting operation of the departments and less efficient service to the patients. This service to patients should be paramount.



President

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE KIDNEY (A Ciba Foundation Symposium, Arranged Jointly with the Renal Association), ed. by *A. A. G. Lewis*, M.D., and G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., assisted by Jean Etherington. (Boston, Little, Brown and Company, 1954. $6.75).

THE YEAR BOOK OF DRUG THERAPY (1954-1955 Year Book Series), ed. by *Harry Beckman*, M.D. (Chicago, The Year Book Publishers, Inc., 1955. $6.00).

BOOK REVIEWS

(Additional Book Reviews on page 98)

THE CITY OF HOPE, by *Samuel H. Golter* (New York, G. P. Putnam's Sons, 1954. $3.50).

In 177 pages, Mr. Golter recounts his connection with the development of a medical center, The City of Hope, outside Los Angeles. The expansion of facilities for medical care from two tents for the tuberculous to a large research and teaching unit for patients with cancer is only part of Mr. Golter's objective. The other is the "humanizing of the processes of dealing with the sick."

It would seem that he is a little late, although his motivations are laudable. For the emphasis that he places upon the "humanity of man to man" is not new to institutions or their staffs. Mr. Golter did not invent it, but he implies that those who do not practice his particular interpretation of the thesis are devoid of sound human feeling. Basically, what he is reaching for is an attitude. Such an attitude may be found readily in a number of hospitals, research centers and in the staffs that they encompass.

Unfortunately, in reading this brief volume, what one finds uppermost is not The City of Hope, with its tragedies, its conflicts, its humor, its strong dedication to the healing arts in their finest sense, but rather the connection that one individual had with its growth. Scattered throughout are bits of homely philosophy which strike this reviewer as genuine enough, but confined and limited by the platitudes that crowd the pages.—*Leon J. Galinsky*, M.D.

GROWTH AND DEVELOPMENT OF CHILDREN, Second Edition, by *Ernest H. Watson*, M.D. and *George H. Lowrey*, M.D. (Chicago, The Year Book Publishers, Inc., 1954. $7.00).

This manual was originally a mimeographed outline used at the University of Michigan. Now, through revisions and additions, it has entered its second edition as a well-accepted manual for the student of growth and development of children. The discussions consider heredity and environmental factors of growth, normal measurements, the premature infant, behavioral development, organ development, the role of the endocrine system, nutrition, and, in the final chapter, growth appraisal. A new chapter has been added—a very interesting and comprehensive consideration of facial growth and dentition.

The practicing physician, as well as students of pediatrics, nutrition and public health, will find this manual very valuable, inasmuch as to understand the abnormal, one must know the normal. For the reader who desires to dwell deeply in any of the discussions presented, there are very adequate references at the end of each chapter.—*M. E. Alberts*, M.D.

EMERGENCY TREATMENT AND MANAGEMENT, by *Thos. Flint, Jr.*, M.D. (Philadelphia, W. B. Saunders Company, 1954. $5.75).

Dr. Flint, the director of the Division of Industrial Relations in the Permanente Medical Group, has compiled a nicely edited volume on the emergency treatment of disease. General medical principles, specific emergency treatment, and administrative and clerical procedures are outlined briefly. Individual topics are dealt with succinctly and clearly. Large-type headings and numerical subheadings make reference easy.

More and more of this type of book are appearing in print as the United States becomes increasingly industrialized. This book belongs primarily in factories and in hospitals, where a general physician or nurse can consult it for proper treatment of a given condition on short notice and before deciding whether or not a specialist should be called. This particular volume is one of the more comprehensive of its type that the reviewer has read.

One would assume from its contents that the Permanente Medical Group has had a broad variety of experiences in such medical emergencies.—*Daniel A. Glomset*, M.D.

OMPHALOSOPHY AND WORSE VERSE, by *W. B. Bean*, M.D., professor and head, Department of Medicine, University Hospitals, Iowa City. (Published by the author, 1955. $ .50.)

What laughter rocks the college halls!
What glee from ivory tower falls!
Here professorial dignity
Is flung aside for all to see.

From laboratory and from clinic
Come these gibes of the bedside cynic.
Here are puns made *sans* contrition,
Medical whimsy and erudition.

Some might think this book of verse
Lusty, raucous—even worse;
But in the mind of this reviewer
To the pure, all things are pure.

L'Envoi

While coaches get free Cadillacs,
'Tis plain that business sense Bean lacks,
To pick the brains of this famed scholar
The cost is only half a dollar!

Herman J. Smith, M.D.

MEDICAL HISTORY



Milestones in Medicine

Choosing the greatest milestones in their respective fields of special interest is a favorite game for all the different sorts of scholars. Each of us is familiar, at least vaguely, with the "ten wonders of the ancient world" and, if pressed, could name at least one or two of them. Creasy, a nineteenth century English historian, we remember, chose what he considered the world's fifteen most decisive battles and wrote a book in defense of his evaluations. It is quite understandable, then, that every once in a while someone in medicine indulges in this sort of speculation. Dr. Louis H. Roddis, of San Diego, has most recently done so, in an article entitled "The Ten Greatest Advances in Medicine."*

Concerned as we are with current developments which, collectively, are responsible for highly dramatic reductions in death and morbidity rates during the most recent twenty, or even ten, years, we are astonished to find that only one of Dr. Roddis's choices is a discovery for which our contemporaries have been responsible. And it is an equally great surprise, and something of a disappointment, for us to note how few Americans have figured in the work he calls greatest.

EARLIEST MAJOR DISCOVERIES

The earliest of the medical achievements that he thinks should rank in the greatest ten is the ligature for controlling hemorrhage. Celsus, a Roman author, mentions it as having been used in his time, about 25 A.D., and there is a probability that it was used even earlier by Greek surgeons. But, like much of the rest that was worth knowing, the technic was forgotten during the period following the fall of Rome, and it was not rediscovered until the sixteenth century, when the French military surgeon Paré thought of tying a string around a blood vessel. In the meantime, the principal methods for controlling the flow of blood had been cauterization with a hot iron and with boiling oil, in consequence of which there was always infection and, if the patient lived, some serious scarring, not to mention the agony that was always a by-product.

The second of Dr. Roddis's ten choices, chronologically, was the discovery of the circulation of the blood, in 1628, by the English physician William Harvey. A famous English author of Harvey's period, Sir Thomas Browne, declared that he preferred that discovery to the one which Columbus had made, and though it is probable that no very significant life-saving technics followed immediately from Harvey's new contribution to knowledge, Dr. Roddis is quite justified in thinking that all of our modern methods of diagnosis and treatment, both medical and surgical, are dependent upon it.

REMEDYING A FAULT IN DIET

The third achievement that he singles out was the conquest of scurvy. Dietary deficiency—specifically a lack of vitamin C—is estimated to have cost the lives of a million sailors between 1500 and 1800. James Lind, a naval surgeon in the service of His Brittanic Majesty King George II, demonstrated in 1747, that orange juice could both restore the health of men already afflicted and prevent others from contracting the ailment. Thus he pioneered in the work that has since included the conquest of beri beri, pernicious anemia and other diseases resulting from food restrictions. It is, perhaps, evidence of the tradition that invests tardiness in military reform that 49 years elapsed before the British Navy authorized the issue of a daily ration of orange juice to supplement the sailors' dried or salted meat and hard tack.

Fourth in the list is the discovery of smallpox vaccine, or more broadly speaking, the development of the principle of antitoxin. In 1798, Jenner, a country doctor in western England, published a tiny volume outlining his now familiar prophylaxis against the scourge which had swept Europe innumerable times and which, perhaps most notably, had laid waste the city of London in 1666. The famous London fire of that year had ended that epidemic, though no one succeeded in discovering why. Dr. Roddis points out that our procedures nowadays for the control of typhoid, tetanus, diphtheria, cholera, yellow fever and other diseases employ Jenner's principle, and that perhaps poliomyelitis will shortly be added to the list.

The invention of the stethoscope (1819) is the fifth of Dr. Roddis's ten most important discoveries. It has become the badge of the physician, so far as the general public is concerned, it is the foundation stone of modern knowledge regarding diseases of the chest, and though it is perhaps no more than the forerunner of many modern diagnostic instruments, it still is more widely useful than any of the others of them.

Sixth was the discovery of anesthesia. A country physician in Georgia, Dr. Crawford Long, is credited with having performed a minor operation

* THE MILITARY SURGEON, December, 1954, pp. 445-450.

upon a patient anesthetized with ether in 1842. At Boston, in 1846, Dr. John C. Warren removed a tumor of the jaw after administering ether at the suggestion and with the assistance of a dentist, Dr. W. T. G. Morton.

DISCOVERY OF BACTERIA

Seventh of the ten, chronologically, was the discovery that bacteria and other living organisms cause infectious diseases. Several men had parts in setting up that milestone, and their work was published at intervals, from 1857 until 1882. They included Louis Pasteur, a French chemist who later took a medical degree, (fermentation, 1857); Joseph Lister, an English surgeon (antisepsis, 1867); and Robert Koch, a German physician (cultivation of bacteria, 1881, isolation of the tubercle bacillus, 1882).

Eighth, came knowledge of the transmission of diseases by insects, parasites and other animals. Though Major Walter Reed's studies in the transmission of yellow fever in Cuba shortly after the Spanish-American War usually are thought of as the pioneer work in that field, it was Patrick Manson who made the earliest contribution. He demonstrated in 1879 that the minute hairlike worms that cause filariasis are carried by mosquitoes, and later, in 1900, he showed that malaria is transmissed by insects of the same sort. Another American, Theobald Smith, had proved, in 1893, that cattle ticks carry Texas fever.

A principal consequence of Reed's, Manson's and Smith's work was the conquest of the plague, or "black death," that is said to have killed half of the population of Europe during the fourteenth century. As late as 1897 it killed a half-million people in India, but during the very next year is was shown that fleas carry the infection from rats to men, and preventive measures were made possible.

The ninth important discovery in Dr. Roddis's list is the x-ray (1895), which was developed, as everyone knows, by the German physicist William Roentgen. It has become one of the greatest of our diagnostic aids and, in addition, is now employed as a means of treating many conditions. Besides, it has paved the way for the medical utilization of radium.

SULFAS AND ANTIBIOTICS

Number ten in the list, as certainly was to have been expected, are the sulfonamides and the antibiotics. Dr. Roddis calls particular attention to the fact that until they were discovered there practically was no such thing as a specific. The Romans, he says, had been aware that iron is beneficial in certain types of anemia and had deliberately rusted swords in order to get medicine for such patients. And, similarly, it had been discovered that orange juice is a "magic bullet" for the curing of scurvy. But except for quinine in the treatment of malaria and Dr. Paul Ehrlich's arsenic compound "606" for combatting syphilis, physicians were unaware of anything that would single out and fight a particular disease entity, as distinguished from remedying a dietary deficiency. Sulfonamides and antibiotics, particularly when they are used in combinations, will do just that. The discoverer of the sulfonamides was G. Domagk, a German whose work was published in 1932, and credit for finding and utilizing penicillin (1942) is given to A. Fleming and H. W. Florey, both Englishmen.

It would be foolish, of course, to contend that those ten choices are indisputable. Indeed, it is probable that a surgeon would have compiled a markedly different list. And likewise it would be foolish to maintain that the latter five, because from the first they were more readily applicable to medical practice, are necessarily greater in importance. But, except for the ligature which, it seems, is nearly as old as medicine itself, those of the discoveries by means of which physicians have been enabled directly and immediately to to conquer disease and preserve health belong predominantly to the most recent hundred years, and the tempo at which significant developments are occuring seems to be quickening.

PROGRESS IN PNEUMONIA TREATMENT

Like the public at large, we are far too likely to take progress for granted and to fail to recognize the rapidity with which it is being made. The horse-and-buggy doctor of fifty years ago had, for instance, to sign the death certificates of 33 in every 100 patients whom he treated for pneumonia. In addition to the deaths, there was an incalculable loss in man-hours which resulted from prolonged illness and slow recuperation. It has been antibiotics, principally, which have enabled the physician to sign, not 33, but no more than one or two death certificates for every 100 pneumonia patients whom he has treated, and despite the expensiveness of the drugs themselves (though those prices are being reduced) and despite the rise in *per diem* cost of hospitalization, he is able to get them through their illnesses and back to their work in so much shorter time that their aggregate expenses are far less than they used to be.

Dr. Ralph E. Smiley, of Mason City, has made available the case histories of two pneumonia patients at the Park Hospital there, cases that illustrate what pneumonia was in the days before penicillin and what it is today. The first of them, a 65-year-old housewife, became ill on March 1, 1931. When she was taken to the hospital three weeks later, pus had collected in her right lung. It had to be aspirated. Later, when the pumping procedure was insufficient, some of her ribs had to be resected so that an opening could be made in her lung for direct drainage. When it seemed likely that the operation might have to be repeated, internal drainage began, her temperature

fell and she began to recover. Because she had lost weight and because, in addition to pneumonia, she had an operation to recover from, the total length of her illness was prolonged to 100 days. These were the costs, so far as they could be expressed in dollars and cents. For a younger individual, one who would have been engaged in gainful employment and upon whom a number of people depended for their living, the cost would have been much larger.

EXPENSES IN A PNEUMONIA CASE, 1931

Hospital room and board, 55 days @ $5.20	$285.00	
Drugs	17.45	
Dressings	5.30	
Operating Room	7.50	
Total Hospitalization		$315.25
Operation	100.00	
Physician's Calls	103.00	
X-rays (5 plates)	30.00	
Laboratory	10.00	
Total Professional Services		243.00
GRAND TOTAL		$558.25

Dr. Smiley's second case, a 40-year-old farmer, was taken to the hospital on September 22, 1953, the same day that he experienced a severe shaking chill. His fever was 103.5°F. when he got there. Pneumonia had made so little headway in his chest that the diagnosis wasn't altogether certain until it had been confirmed by x-ray. Penicillin treatments were given him, the first one no more than 30 minutes after he reached the hospital, and his temperature returned to normal within 14 hours. It stayed normal. He was given a final, long-acting shot of penicillin at the doctor's office on the day that he left, and he was back at his job seven days later. On the tenth or eleventh day, he was able to work full time. These were his bills:

EXPENSES IN A PNEUMONIA CASE, 1953

Hospital room and board, 4 days @ $12.50	$ 50.00	
Drugs	19.65	
Dressings	.85	
Total Hospitalization		$ 70.50
Laboratory	7.00	
X-ray	10.00	
Physician's House Call	5.00	
Physician's Services in the Hospital	30.00	
Total Professional Services		$ 52.00
GRAND TOTAL		$122.50

Because myriad examples of this sort could be cited to demonstrate the mounting efficiency with which modern physicians work, it is obvious that even though some of the ten greatest discoveries in medicine are now in the far distant past, new ones, together with improvements that are constantly being made on the old, have begun paying tremendous dividends to the public.

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1955, in Des Moines.

BOOK REVIEWS

(Additional Book Reviews on page 95)

DISEASES OF THE SKIN FOR PRACTITIONERS AND STUDENTS, Fourth Edition, by *George Clinton Andrews*, M.D. (Philadelphia, W. B. Saunders Co., 1954. $13.00).

The fourth edition of this book by Dr. Andrews is well planned and well written. Many chapters have been revised and some of them rewritten. New diseases and syndromes have been added. The management and treatment of the diseases discussed have been brought up to date. The chapters on fungus diseases, viral diseases and the cutaneous manifestations of internal cancer have been amplified. The diagnosis and treatment of the various types of pigmented nevi have been elaborated upon in greater detail.

Each chapter contains a helpful list of selected references. There are also 777 illustrations. This is a valuable book written by one of the leading authorities in dermatology, a physician who has many years of academic and clinical experience. It is highly recommended to students and general practitioners as well as to dermatologists.—*Maurice H. Noun*, M.D.

INTERN'S MANUAL (Cook County Hospital), by *Arthur Bernstein*, M.D. (Chicago, The Year Book Publishers, Inc., 1954. $3.00).

This 292-page, pocket-sized manual is arranged in an alphabetical fashion so that the information which it contains may be readily available. The more common situations seen in an intern's practice are presented with emphasis on immediate care and treatment.

It is not expected that a manual of this size can be complete, nor that it can follow all hospital routines. That limitation, however, does not deprive this small-sized handbook of its principal value, that of giving the intern a useful reference for emergency care.—*Herman J. Hausheer*, M.D.

REMARKABLE ELECTRON PHOTOMICROGRAPHS

The full-page ads for the Upjohn Company, of which four were published in the January issue and two appear in this issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, are truly remarkable electron photomicrographs of pathogenic organisms. The magnifications are far beyond anything that most physicians have ever seen. If a human hair were comparably enlarged, it would be ten feet in diameter.

A complex but wonderful story is said to lie behind these photographs. Indeed, a spokesman for the company has said, "Both the clinical and technical problems involved in such a procedure are staggering."

When electron photomicrographs of 24 organisms sensitive to Panmycin (Upjohn) are available, along with the most common diseases in which each is usually involved, they will be reproduced in an album, from which the individual pictures can be removed for framing. The collection will be available to physicians who wish to have it.

AN OPEN LETTER

To Mr. Louis B. Blair, President, Iowa Hospital Association

Dear Mr. Blair:

I am writing this as an individual physician who is very much concerned about the future of the practice of medicine. I saw the telecast in which you and Dr. Walter Abbott participated. I feel that the real issue at stake was not discussed. I think I can fathom the reason. Dr. Abbott, whose greatest desire is to arrive at a solution amicably, must not have wished to antagonize you. For your part, it is great wisdom to hide your true reason.

I will admit I am very naive, by present standards. I can't help thinking of my patients as individuals. Each one is a separate person with a problem who has come to me for help. I get a feeling of satisfaction when I do him some good, or of sadness when I fail. I don't believe my individual should fit into some category—one of 50 ulcer cases, or an acute appendicitis. He is not just another patient, but to him he is THE patient and I am THE doctor, not just another doctor. That viewpoint is supreme, and to change it removes the heart from medicine.

It has been very discouraging and disheartening in the past few years that there should be so many and varied plans to remove this "heart." There have been so many, so very many, of our so-called thinkers and intellectuals who have plans for improving the medical care of the people! But why is it that so few doctors, who see these people every day, can agree to these wonderful and enlightened plans? I can only feel that ignorance must motivate most of those who would change our type of medical care. Surely, they cannot use human illness as a stepping-stone for personal gain. Surely, surely, they must have an honest, though gross, misconception of the medical needs of the people.

I was very much dismayed when you called the Decatur Contract "ridiculous," Mr. Blair. Either you are aiming at something bigger, or else you have not read the contract. The hospital is fully protected, does not lose a cent of revenue, and stands to gain from improved professional supervision and advice—without the least possibility of an increased cost to the patient.

I feel that you may not understand the problems and needs of the smaller hospitals. I have heard rumors that the Hospital Association would like to become the center for determining and providing for the health needs in each community—that it wishes the power to hire doctors to carry out its bidding in administering to the ills of the people. If this is your intention, then you are *a part* of the tail that wishes to wag the dog.

American medicine has elevated our medical knowledge far above that of any previous period in history. It is regrettable that, in the process, certain components of the profession should have become closely enmeshed with hospital services. During simpler times, the distinction was more academic than real. However, now that we have an opportunist type of society, which tries to tell John Brown that it knows what is best for him, whether John agrees or not, the medical profession is awakened to the fact that it is in a do-or-die struggle. It must back up and extricate those of its branches that have fallen and now are considered by you and others NOT to be parts of medicine. There can be no doubt that pathology and radiology ARE integral parts of medicine. If you can prove that they are parts of hospital service, there is nothing to prevent any other doctor of medicine from being considered part of hospital service.

Also, you state that nothing has happened to upset previous relationships, but I noticed on your TV program that your tendency was to discount the Blue Cross Comprehensive Contract No. 70. You even hinted that it had been modified to remove some objectionable features. However, two days before your broadcast, two Blue Cross agents were in the Decatur County Hospital, of all places, trying to sell the nurses and aides Comprehensive No. 70, with all the objectionable features, along with some services which are now covered by Blue Shield, to which they had already subscribed. That would be a nice plum, wouldn't it, Mr. Blair?

Now that we have returned to Decatur County Hospital, let's remain there a minute. As you are well aware, Miss G. M. Green is the superintendent and is very capable. She visits the patients daily, learns their needs and hears their gripes. Of course, I realize that your hospital is larger, but still not too large. Do you visit your patients daily, Mr. Blair? Are you close to each patient in your hospital?—close enough to realize that he is an individual with an individual's problems? If, perchance, you are not close to those patients individually, how can you speak for them collectively?

In your interview on TV, you uncompromisingly committed yourself. That being your final decision, there is no need of permitting your group to hide behind the subterfuge that this is a fight by the hospitals of the state to prevent a few greedy specialists from exploiting the public. That is far from the truth. This is a fight prompted, not by the hospitals but by a few hospital administrators. If their objectives are fulfilled on this limited scale, the door will be opened to a grandiose plan that will engulf the entire medical profession. Rest assured that the profession is fully aware of this, and that the entire public will be before it is over.

Now, in summary, the medical profession has the best interests and welfare of the public at heart. I feel that the doctor is more intimately in contact with the individuals who combine to make up that group we call the general public. Any decision concerning health and medical problems which is not backed by the consensus of the doctors of medicine is not in the best interests of the people.

In our society, we need nurses, God bless them; we need technicians for their skill; we need hospitals; and we need hospital managers and administrators to operate them.

However, the center of all the health problems must be the doctors.

Yours truly,
C. N. Hyatt, M.D.
Corydon, Iowa.

Dr. Hyatt's letter is a good definition of the real issues underlying the controversy between the Iowa Hospital Association and the Iowa State Medical Society. We believe the controversy can be easily settled at the local level, in accord with Iowa law, if all parties enter the negotiations in a spirit of cooperation.

FREE MEDICINE IS THE SAFEGUARD OF HEALTH.

—Iowa State Medical Society

MENTAL ILLNESS

PSYCHIATRIC REFERRALS

The most important factor in the referral of a patient to a psychiatrist is the attitude of the referring physician. If the physician is hesitant, apologetic, anxious or defensive in expressing his opinion that a psychiatric consultation is in order, the patient will react to the attitude of his doctor, as well as to his own fears. The referring physician can be of great help in dispelling the prejudice and concern which his patient and his patient's relatives already have.

A constructive attitude on the part of the physician, however, can frequently lay valuable groundwork for the psychiatrist.

A patient who has an emotional illness should be told in a forthright, accepting manner that his symptoms appear to be related to an emotional disturbance. Appropriate concepts should be explained to the patient in a casual, reassuring manner—for example, how anger can cause epigastric pain, *real* pain, just as much as an ulcer.

Next, after the patient has accepted his doctor's recommendation, the doctor should make a definite appointment with the psychiatrist. He should give the patient some idea of the length of time the psychiatric examination will take, the cost and what the physical surroundings will be like. He should encourage his patient to be completely honest in relating his anamnesis. In addition, the doctor should send an abstract of the case to the psychiatrist *prior* to the appointment date, if possible, and should also request that an informant accompany the patient. An informant is of most value in children's cases, court cases, marital problems and psychotic cases. The patient should be told by his doctor that the consultation is only for the purposes of evaluation and diagnosis, and that he will receive no treatment during the visit for which an appointment has been made.

If the patient is psychotic, the physician should discuss the details of the psychiatric appointment with the relatives. The patient should be told that he is going to be examined by a psychiatrist, and should be verbally reassured about the appointment, not threatened. In addition, the relatives should be told that psychotic patients occasionally become apprehensive about having such an interview. It should be explained to them that such uneasiness is a symptom of the patient's illness, and that they should make the patient keep the appointment. A severely disturbed patient is not capable of deciding whether or not he should see a psychiatrist. Therefore, it is up to the responsible relatives to see that proper medical steps are taken. Because, frequently, the responsible relatives feel guilty about making the patient accept psychiatric aid against his will, they should be reassured, and it should be pointed out to them that they are really helping the individual.

One further point should be mentioned. After the psychiatrist has seen the patient, he sends a report of his examination to the referring physician, for he certainly realizes that the local doctor must give his patient some interpretation of the results of the psychiatric consultation. However, for several reasons, it is seldom advisable for the local doctor to show the psychiatric report to the patient. Sometimes it is harmful for the patient to know his diagnosis, for frequently the evaluations of the patient's personality contained in the report would be quite disturbing to him, and sometimes the psychiatrist's dynamic formulations about the cause of his illness would be unacceptable to him.

REGIONAL MEETINGS OF THE ICS

On February 11 and 12, the Mid-Atlantic Division regional meeting of the International College of Surgeons will take place in Washington, D. C., and on February 28 and March 1, the Southwestern Division meeting will be held in Houston. The program for the first of those is to include papers and panel discussions on orthopedic surgery, gastrointestinal surgery, gall bladder disease, peripheral vascular disease, plastic surgery, gynecology and cardiac surgery. Papers and panels at the latter one will take up surgery of the colon, gynecologic surgery, anesthesiology, surgical management of trauma and a considerable number of other topics.

DISEASES OF THE CHEST

The Council on Postgraduate Medical Education of the American College of Chest Physicians, in cooperation with the local hospitals and medical schools of Philadelphia, will sponsor the Eighth Annual Postgraduate Course on Diseases of the Chest, at the Bellevue-Stratford Hotel, Philadelphia, March 7-11. Tuition is $75.

Information may be secured from the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

POSTGRADUATE LECTURE AMPHITHEATER, V-A HOSPITAL, DES MOINES

Monday, February 21, 1955

Dr. Wm. Barry Wood, professor and head, Department of Medicine, Washington University School of Medicine, St. Louis

"Acute Bacterial Pneumonia"

Dinner at 6:30 p.m., $1.75. Send reservations in advance to Dr. I. H. Sheeler, chief medical officer, V-A Hospital, 30th and Euclid, Des Moines 9. (The lecture is at 7:30 p.m.)

All physicians are cordially invited. They are asked to note that the dinner and lecture are at earlier hours than have been usual in this series.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

MORBIDITY REPORT

Disease	Dec. 1954	Nov. 1954	Dec. 1953	Most cases reported from these counties:
Diphtheria	3	1	2	Boone, Page, Pocahontas
Scarlet Fever	55	48	125	Black Hawk, Des Moines, Polk
Typhoid Fever	1	2	1	Scott
Smallpox	0	0	0	.....
Measles	249	126	461	Allamakee, Linn, Scott
Whooping Cough	51	35	25	Black Hawk, Cerro Gordo, Polk
Brucellosis	14	14	18	Mitchell & Scott 2 each—others scattered 1 to a county
Chickenpox	398	178	414	Black Hawk, Polk, Scott
Meningococcus Meningitis	1	1	3	Woodbury
Mumps	519	371	172	Black Hawk, Dubuque, Polk, Story
Poliomyelitis	23	80	22	Polk 3, Sac 2, Webster 2
Rabies in Animals	21	17	7	Cerro Gordo 2, Washington 2—others scattered 1 to a county
Infectious Hepatitis	120	108	162	Black Hawk, Hardin, Linn, Polk
Tuberculosis	32	38	32	For the state
Gonorrhea	59	53	63	For the state
Syphilis	88	114	133	For the state
Encephalitis*	10	1	0	Pottawattamie
Malaria	1	1	0	Chickasaw (Veteran, foreign service)

* Some are delayed reports.

THE COUNTY PUBLIC HEALTH NURSE IN TUBERCULOSIS CONTROL

County public health nurses are engaged in generalized nursing which embraces family health services. A family health service includes health guidance for all age groups and nursing service for all types of conditions. To fulfill her responsibilities, the nurse must have a knowledge of public health nursing procedures, including skills in applying mental health principles as they relate both to the patients and to the people with whom she is cooperating in her work.

Family health service in tuberculosis control requires, in addition to a knowledge of tuberculosis, an interest in all aspects of family and community health. For the nurse must exercise judgment in making sure that the various needs of the family and the community receive proportionate emphasis.

Prevention in tuberculosis involves case finding, treatment and rehabilitation after treatment. The nurse's responsibilities in these phases of control are as follows:

Case finding

Encouraging periodic medical examinations for all members of the family.

Referring persons with suspected tuberculosis to their family physicians for medical care.

Recommending that contacts of known cases of tuberculosis seek medical examinations and, if necessary, seeing that physicians' recommendations are followed.

Interpreting to the patient and his family the significance of diagnostic findings such as the results of tuberculin tests, sputum examinations and other tests.

Assisting in making epidemiologic investigations and in reporting cases in accordance with regulations of the State Department of Health.

Treatment

Helping physicians and community agencies to arrange for and to prepare patients for hospital care.

Informing patients, families and communities regarding Health Department rules and regulations as they pertain to tuberculosis.

Helping patients and their families adjust to the impact of a long-term communicable disease.

Cooperating with community health and welfare agencies in meeting the needs of patients and their families.

Assisting families and communities in adjusting to the patients' return from the hospital.

Giving or arranging for necessary nursing care, under the direction of the family physician, teaching through demonstration, and supervising the care given by relatives.

Teaching the patients and their families the importance of personal hygiene and the precautions necessary to prevent the spread of infection, or, if the patients have been hospitalized, seeing that they understand what they have been taught while in the hospital.

Administering or supervising the home medications that have been prescribed in writing by the physician.

Interpreting to recalcitrant patients and their families the necessity for treatment such as isola-

tion or hospitalization, which is necessary for the protection of the public health.

Rehabilitation

Helping patients and their families to understand that they must live within the physical limitations imposed upon them by the disease.

Encouraging patients to follow through with the activities recommended by the hospital and by the state rehabilitation counselor.

Finding patients eligible for training and conferring with physicians in charge regarding the suitability of referring them to rehabilitation workers.

Informing prospective employers and their employees that persons with *arrested* tuberculosis will not endanger the health of others. (People who have had the disease must only be encouraged to secure routine physical examinations and to adhere to the regime prescribed by their physicians.)

Referring the post-tuberculous individuals to agencies that will assist them in finding suitable occupations or employment.

Since tuberculosis is frequently spread through contact with family members, nursing in tuberculosis needs to be a year-round family health service. In tuberculosis nursing, not only is the nurse concerned with caring for the patient and securing examinations for family and community contacts, but she also gives attention to the health and social problems of each member of the family. The scope of her services is reflected in the health records she keeps.

In planning either for a contact program or for a special program in tuberculosis case finding, one must not overlook the contributions that other professional and volunteer community workers can make. They can supplement the above listed activities of the public health nurse. The breadth of the nursing program, with the resultant demands upon the nurse's time, necessitates selectivity in deciding upon the jobs which the nurse is to do and an occasional reappraisal and realignment of the various phases of her total service.

REPORT OF TUBERCULOSIS FIELD PROGRAMS

July 1-December 31, 1954

FEDERAL FOLLOW-UP SURVEY

A survey of active or probably active non-hospitalized cases of tuberculosis was completed recently in an area of Iowa including five adjoining counties. Of the 51 cases investigated in the 5 counties, 33 were found to have active or probably active tuberculosis. Of the remaining 18 cases, 7 had been as arrested, 5 were found to be inactive, 4 had moved out of the state, 1 was non-tuberculous and 1 could not be located.

This survey of a 5-county area in Iowa is part of a national spot-check being conducted by the U. S. Public Health Service. As representative districts, 37 areas in 24 states were chosen to give information on the non-hospitalized, active tuberculosis cases throughout the country.

Before the survey was started, the Iowa State Department of Health secured the approval of the medical society in each of the counties in the project area. The visiting nurse association and the county nurses carried on the investigation in two of the five selected counties. In the other three, the work was done by members of the Division of Tuberculosis Control of the Iowa State Department of Health.

COUNTY-WIDE CASE FINDING PROGRAMS

A survey of four counties was conducted during the last six months of 1954. Every adult (seventh grade and over) was given an opportunity to have a chest X-ray. The following is an analysis of findings in three of the counties:

Number of 70-mm. films taken	22,041
Number referred for large films	236
Number of 14 x 17 films taken	221
Number of persons referred who failed to report	15

FINDINGS IN THE LARGE FILMS

Probably active tuberculosis	2
Probably inactive tuberculosis	9
Probably healed tuberculosis	48
Tuberculosis, activity undetermined	8
	67
Non-tuberculous findings (one or more per patient)	104
Healthy chests	50
Total	221

CONTACT CASE FINDING PROGRAMS

In 25 programs, persons who had had known or suspected contact with tuberculosis were tuberculin-tested and X-rayed. The total number of persons of whose chests 14 x 17 films were taken was 1,437.

FINDINGS IN THE LARGE FILMS

Probably active tuberculosis	16
Probably inactive tuberculosis	50
Probably healed tuberculosis	207
Tuberculosis, activity undetermined	41
	314
Non-tuberculous findings (one or more per patient)	245
Healthy chests	878
Total	1,437

Continuous follow-through on known and suspected cases of tuberculosis by county and staff nurses is maintained under the direction of the private physicians.

SPECIAL AND EMERGENCY SURVEYS

During the last six months of 1954, 17 programs of the special or emergency sorts were conducted,

with 13,003 of the 70-mm. films being taken. The groups included schools and school personnel, food handlers, bus drivers, county homes, industries and a few communities. Local referral for large chest films was made in 143 cases. Of the 31 large films taken by the Mobile Unit, 11 revealed probable cases of tuberculosis. An additional 286 bus drivers were X-rayed in connection with the Contact Programs.

SUMMARY OF NON-TUBERCULOUS PATHOLOGIES FOUND

County-wide Programs: 177 Contact Programs: 421
Special Programs: 337

Thoracic cage anomaly	29
Bone lesion	5
Pleural abnormality	109
Postoperative chest	30
Abnormal diaphragm	17
Hilar node calcification	120
Calcified diffuse granulomatous lesions	59
Pneumonitis	25
Possible neoplasm	24
Abscess	3
Fibrosis—cause unknown	67
Incr. bronchovascular markings	46
Bronchiectasis suspect	29
Coin lesion	34
Pneumothorax	3
Atelectasis	15
Emphysema	40
Mediastinal mass	32
Abnormal aorta	95
Abnormal heart size/contour	140
Soft tissue abnormality	6
Suspected histoplasmosis	7

I. Number of cases of tuberculosis reported for the first time during the period July 1 to December 31, 1954 (from physicians, hospitals, death certificates and other sources)	266
II. Number of cases hospitalized	157
Number not hospitalized or not stated	109
III. Number of cases of *probable tuberculosis* found in	
County-wide Programs	67
Contact Programs	314
Special Programs	11

Follow-through letters on probable cases of tuberculosis were sent to physicians for confirmation of diagnosis. Confirmation letters were received on 58 cases.

In response to inquiries sent to physicians regarding the disposition of suspected malignancies (neoplasms, mediastinal masses, coin lesions) found in the three programs, July 1 to December 31, 1954, the following information has been received:

Reported under observation	16
Malignancies confirmed surgically or previously known	6
Surgery pending	3
Surgery not indicated	3
Benign lesions and/or no malignancy	16
Patients have refused care	6
Total 70-mm. films taken	35,330
Total 14 x 17 films taken	1,689
Total cases of tuberculosis reported	266

THE DOCTOR'S DUTIES AS A CITIZEN

In the BRITISH MEDICAL JOURNAL,* E. C. Dawson, M.R.C.S., has reported the replies to a questionnaire that he sent both to laymen and to physicians to learn their attitudes toward the maintenance of professional secrecy by doctors when the welfare of people other than the patient would benefit from the doctor's reporting what he had found out. Majorities of both of the groups questioned were of the opinion that the doctor need not feel bound to his oath under such circumstances.

Though the letter of the British law permits no privileges to expert witnesses in the field of medicine, trial judges don't actually require them to reveal confidences, and the British Medical Association seeks to impose a rule of absolute secrecy, regardless of consequences, however dire they may be.

Thirty questions were asked, in each of which a practical and reasonably likely problem was posed. There was a choice of three replies: "Yes" (the doctor should reveal information); "No" (he should keep the patient's secret); and "Uncertain." Brief comments were invited.

Following are some representative questions. (1) A doctor diagnoses epilepsy in a passenger-train engineer. The patient refuses him permission to report his findings to the railway management. (2) A doctor attending a woman for abortion learns that the condition was criminally induced by a professional abortionist and learns the abortionist's name and address. The patient refuses to let the doctor report the case to the police or even to let them know the abortionist's name. (3) A doctor learns that a man whom he has treated for rupture is claiming workman's compensation on the grounds that his disability was the result of an industrial accident which took place subsequent to the doctor's diagnosis. (4) A doctor, in making a house call, notices articles there which he has excellent reason to believe have been stolen.

The following breakdown was made of the replies to questions 2, 3 and 4:

REPLIES TO QUESTIONS 2, 3 AND 4

	Question 2			*Question 3*			*Question 4*		
	Yes %	*No* %	*Uncertain* %	*Yes* %	*No* %	*Uncertain* %	*Yes* %	*No* %	*Uncertain* %
G.P.'s over 50	44	56	0	24	72	4	36	64	0
G.P.'s under 40	50	50	0	36.5	63.5	0	27	73	0
Consultants	64	32	4	20	80	0	36	60	4
Med. Health Officers	45.5	50	4.5	54.5	41	4.5	36.5	59	4.5
Total doctors	51	47	2	34	64	2	34	64	2
Solicitors*	50	47	3	43	57	0	57	43	0
J.P.'s**	67	27	6	60	34	6	47	53	0
Church of Eng. clergy	50	42.5	7.5	38.5	54	7.5	38.5	50	11.5
Total laymen	55.5	39	5.5	47	48.5	4.5	47	49	4

* Lawyers, as distinguished from barristers, who are unqualified to plead cases in major courts.

** Justices of the peace, who, especially in rural England, preside over courts having broader jurisdictions than those of their namesakes in the United States.

In evaluating the replies to question 3, one may think it perhaps significant that claims for workman's compensation, in England, are claims against the Welfare State, rather than against a private employer.

* BRITISH MEDICAL JOURNAL, December 18, 1954, pp. 1476-1478.

WOMAN'S AUXILIARY NEWS

Mrs. Keith M. Chapler, *Publications Chairman,* Dexter, Iowa
President—Mrs. Lester R. Hegg, Rock Valley
President-Elect—Mrs. Charles H. Flynn, 709 W. 15th Street, Clarinda
Secretary—Mrs. Robert P. Mason, 5818 Chamberlain Drive, Des Moines 12
Treasurer—Mrs. Howard H. Smead, 3333 Grand Avenue, Des Moines 12

LINES FROM THE PRESIDENT

Coming together is a beginning; keeping together is progress; working together is success.—Henry Ford

Mr. Ford's statement is particularly applicable to Auxiliary members. Although doctors' wives work individually in their own communities, it is vital that they also work together to achieve correlated thinking and concerted action.

Among the important items which come to my desk is the NEWS BULLETIN of the Iowa State Medical Society. In November, the Medical Society voted to send copies to each of you, too, so that you may be informed on the problems of the State Society and so that you may know something of attempted solutions. We officers appreciate this service and trust that members will study the letters and will brief their husbands on the contents, if necessary.

The Public Relations Chairman and I have a copy each of the new County Medical Public Relations Manual, which has been issued by the AMA through the offices of the Iowa State Medical Society, and is the first textbook in its field. Its divisions are as follows:

1. Emergency call plans
2. Mediation committees
3. Press relations
4. Speakers' bureaus
5. Membership indoctrination
6. Guarantees of care
7. Public service projects
8. Citizens' projects
9. Supplementary projects

Two other booklets which may be of assistance to you are available from the Council on Medical Service, AMA, 535 North Dearborn Street, Chicago 10. "The Key to Community Health Planning" has a title that is self-explanatory. "Main Line Route" emphasizes maternal and child care, and is intended primarily for Woman's Auxiliary work.

RURAL HEALTH CONFERENCE

The Tenth Annual Rural Health Conference will be held in Milwaukee, Wisconsin, soon. On its program "Looking Both Ways," leaders of rural organizations, medicine, education and legislation will have an opportunity to discuss and propose suggestions for solving common problems.

ANNUAL REPORTS

County Auxiliary presidents must mail their annual reports to me not later than February 15. Reports should cover work done from February 1, 1954, to February 15, 1955. We need the reports on time so that they may be printed in the ANNUAL REPORT BOOK which will be distributed at the State meeting in April.

Please follow the outline of the Achievement Award sheet. Individual members should inform county presidents of their personal participation in community activities for inclusion in the reports. These reports are yardsticks by which we judge leadership, progress and success in our own communities. Let's make them the best ever!

Mrs. Lester R. Hegg
President

CRIPPLED CHILDREN'S CLINIC AT SPENCER

A field clinic was held at the Bethany Lutheran Church, in Spencer, on November 9, 1954, by the State Services for Crippled Children, under the auspices of the Clay County Medical Society and its Auxiliary. Children from the following counties were examined: Clay, Buena Vista, Palo Alto, Sioux, Emmet, Kossuth, Lyon, Osceola and Dickinson. It was one of 32 clinics planned for areas throughout the state during 1954.

Mrs. Dean King, first vice-president of the State Auxiliary and president of the Clay County Auxiliary, acted as chairman, under the direction of Miss Clara Faber, county public health nurse. A staff from the Services office at the State University, in Iowa City, came to offer diagnostic service to chronically ill or crippled individuals under 21 years of age who suffer from rheumatic fever, diabetes, cardiac involvement, speech and hearing defects, and orthopedic defects and problems. No charge was made for the services, but all patients were required to have been referred by their local physicians. Information gleaned will be reviewed at the Iowa City headquarters, and findings and recommendations will be sent to the

physicians who referred the patients. The local physician will then interpret the findings to the patient and his family.

From 8:00 a.m. to 6:00 p.m., 105 children were examined. Many local organizations joined in the project with donations of money, time, food, personal activity of members, or by all of those types of contributions. A hot meal at noon and morning and afternoon lunches were served to patients, to parents and to the clinic workers. Members of the Clay County Medical Society, Auxiliary members and Red Cross volunteers all took most active parts in the project.

Mrs. Frank Edington, Third District Councilor for the State Auxiliary and chairman of nurse recruitment for the Clay County Auxiliary, had members of the Future Nurses Club present to entertain the waiting children.

SUGGESTIONS FOR PUBLICITY CHAIRMEN

1. Obtain all the favorable publicity possible. Keep your community informed of the activities of your county Auxiliary through newspapers.

2. Since the Auxiliary is an organization primarily devoted to health education, and is not merely a social group, try to interest your local newspapers in reporting your activities in the news section, rather than in the club or society sections. Send your material to the city editor.

3. Good publicity items, which should be favorably received by newspapers for publication in news sections include: nurse recruitment activities; accounts of addresses by guest speakers on public health, current legislation, civil defense and other vital subjects; nursing scholarships; donations of equipment or money to hospitals and other institutions; radio and visual education projects; the Auxiliary's activities, as a unit, in community drives, health campaigns, civil defense projects, etc.

4. Encourage your members to read the WOMAN'S AUXILIARY NEWS, and to subscribe to and study the BULLETIN of the Auxiliary to the AMA.

5. In submitting your monthly reports:

a. Enclose a copy of each article published in local newspapers.

b. Carefully check each article for accuracy before mailing.

c. If body or article does not contain date of meeting or activity, kindly write it in.

6. Keep a scrapbook of clippings for your county Auxiliary.

All reports received are condensed and sent, in the form of news items, on the fourth of each month, for publication in the following month's issue of the JOURNAL of the Iowa State Medical Society.

Therefore, all county reports must be received before the fourth of each month.

PLYMOUTH COUNTY ELECTS OFFICERS

The Plymouth County Auxiliary had a six o'clock dinner at "Cora's," in Le Mars, on January 4, 1955. Mrs. Lester R. Hegg, of Rock Valley, president of the State Auxiliary, was a guest. Mrs. F. C. Bendixen, chapter president, presided at the business meeting. The following officers were elected for the coming year: Mrs. M. D. Hayden, Marcus, president; Mrs. R. J. Fisch, Le Mars, vice-president; and Mrs. S. E. Lindell, Le Mars, secretary-treasurer.

WAPELLO ELECTS OFFICERS

Meeting at the home of Mrs. C. R. Phelps early in January, the Auxiliary to the Wapello County Medical Society elected the following officers for 1955: Mrs. D. O. Bovenmyer, president; Mrs. R. P. Meyers, vice president; Mrs. Wm. Whitehouse, secretary; and Mrs. K. R. Kingsbury, treasurer.

FUND-RAISING PROJECTS FOR AMEF

1. Give a small dance for members in a home, or give a barn dance.

2. Produce a style show in connection with a luncheon, tea or dinner in a public place or in a member's home or garden.

3. Sponsor a little-theater production.

4. Give a tea or cocktail party.

5. Have a small or large public card party—or a chain of parties in a member's home.

6. Have a large benefit dance open to the public.

7. Turn your home into a Supper Club and have a supper party.

8. Morning coffees are easy to have.

9. Serve meals to doctors at their meetings.

10. Collect and sell your rummage—and your neighbor's too.

11. Auxiliary members have sewed, painted, knitted, crocheted and beaded while attending meetings, thus making bags, hats, aprons, collars, eyeglass cases, corsages, party decorations, etc.

12. Send and encourage members and friends to send memorial cards to the families of bereaved members or friends. Auxiliaries should keep a supply of memorial cards to be mailed immediately at the time of death.

13. Request each member to give a penny for each year of her age in her birthday month. All checks should be made payable to the "AMEF—Auxiliary Fund" and should be forwarded to Mrs. H. A. Spilman, 1231 Castle Street, Ottumwa, Iowa.

Now is the time for you and your Auxiliary to make this year 100 per cent. We can still finance medical education the voluntary way if you will help.

—Adapted from the
WEST VIRGINIA NEWS BULLETIN

COUNTY SOCIETIES

Black Hawk

At the January 18 joint meeting of the Black Hawk County medical and dental societies, Dr. George Thomas, of Pittsburgh, Pennsylvania, gave his lecture and demonstrations on "Explosion Hazards in Hospitals."

Carroll

At a meeting held on December 21, Dr. Paul D. Anneberg was elevated from vice-president to president of the Carroll County Medical Society. Dr. J. L. Cochran was named to replace him as vice-president, and Dr. J. M. Tierney was chosen secretary-treasurer. Dr. Cochran was also chosen to represent the doctors in work with the Red Cross in blood-bank promotion within the county.

Dubuque

Officers of the Dubuque County Medical Society for 1955, elected on December 14, 1954, include: Dr. A. C. Pfohl, president; Drs. D. C. Sharpe and C. C. Griffin, first and second vice-presidents; Dr. J. W. Moberly, secretary; Dr. R. E. Petersen, treasurer; Drs. William Province, Jr., R. D. Storck and R. E. Barton, censors; Drs. R. J. McNamara, R. F. Rusk and D. C. Conzett, delegates; Drs. M. S. Lagen, P. J. Laube and F. Fuerste, Jr., alternates; Dr. H. G. Langworthy, librarian; and Drs. R. V. McKay, Luke Faber and Paul Skelley, members of the board of trustees.

At the meeting on January 11, Dr. Ray Bunge, of the Department of Urology at SUI, spoke on "Fertility and Sterility."

Hamilton

Dr. J. L. Ptacek, of Webster City, is the new president of the Hamilton County Medical Society, Dr. George Paschal, of Webster City, is vice-president, and Dr. D. C. Anderson, of Stanhope, is secretary-treasurer. Dr. F. F. Hall, of Webster City, is delegate to the Iowa State Medical Society, and Dr. Paschal is his alternate.

Hancock-Winnebago

Early in December, Dr. A. H. Dulmes, of Klemme, was elected president of the Hancock-Winnebago Medical Society, and Dr. John Enggas, of Britt, was elected secretary-treasurer.

Jefferson

Dr. F. H. McClurg, of Fairfield, was chosen president, for 1955, of the Jefferson County Medical Society, at a meeting held on December 16. Dr. Robert Ryan, Dr. Chris Palcheff, Dr. R. A. McGuire and Dr. L. D. James, all of Fairfield, were named vice-president, secretary-treasurer, delegate and alternate, respectively.

Johnson

Dr. Russell Meyers, of the Department of Neurosurgery at University Hospitals, spoke on "The Role of Language Habits in Bedside and Laboratory Inquiry" at the January 5 meeting of the Johnson County Medical Society.

Dr. Robert C. Hardin is the new president of the Society. Dr. J. S. Greenleaf continues as secretary-treasurer.

Linn

At the February 10 meeting of the Linn County Medical Society, Dr. Philip Thorek, of Chicago, will discuss "Pre- and Postoperative Care, With Emphasis on the Treatment and Care of Intestinal Obstruction."

Marshall

Dr. Herman J. Smith, of Des Moines, addressed the January 4 meeting of the Marshall County Medical Society on the legal aspects of heart disease.

Dr. Parker K. Hughes, of Des Moines, will speak at the February 1 meeting, on office gynecology, and at the one on March 1, Dr. Russell Meyers, of SUI will discuss "Emergency Treatment of Head Injuries."

Pocahontas

At a meeting of the Pocahontas County Medical Society, on December 16, the following officers were elected for 1955: E. O. Loxterkamp, M.D., Rolfe, president; James Gannon, M.D., Laurens, vice-president; C. L. Jones, M.D., Gilmore City, secretary-treasurer; J. B. Thielen, M.D., Fonda,

delegate; and J. M. Rhodes, M.D., Pocahontas, alternate delegate.

Polk

At the February 16 meeting of the Polk County Medical Society, in the Savery Hotel, Dr. James E. Kelsey, of West Des Moines, will discuss the Kaiser Permanente closed-panel plan. The dinner that is to precede the talk will be served at 6:30.

Pottawattamie

Dr. W. O. Griffith, of Council Bluffs, became president of the Pottawattamie County Medical Society at the annual meeting held on December 21, 1954. Dr. A. L. Nielson, Council Bluffs, was chosen to be president-elect; Dr. Emmett Mathiasen, Council Bluffs, vice-president; Dr. Irving J. Hanssmann, Council Bluffs, secretary; Dr. Frederick Marsh, Sr., censor; Drs. Norman West, of Avoca, and J. D. Mahoney, of Council Bluffs, delegates; and Drs. Frederick Marsh, Jr., of Council Bluffs, and H. W. Mathiasen, of Council Bluffs, alternates.

The annual report of the Pottawattamie County Cancer Clinic showed a total of 63 clinics held and 126 patients seen for diagnostic purposes. Plans were made to sponsor the annual scientific meeting of the Iowa-Nebraska Medical Assembly, on March 24, at the Hotel Chieftain, in Council Bluffs.

Sac

The Sac County Medical Society elected Dr. J. W. Gauger, of Early, as president, and Dr. John Hubiak, of Odebolt, as secretary for 1955 at a meeting held in Sac City on December 9.

Scott

At its March 1 meeting, the members of the Scott County Medical Society will be guests of the Pine Knoll Tuberculosis Sanatorium, at Davenport.

Shelby

On December 14, Dr. Joseph Spearing and Dr. R. E. Donlin, both of Harlan, were elected president and secretary-treasurer, respectively, of the Shelby County Medical Society for 1955. Dr. Spearing will be delegate to the Iowa State Medical Society, and Dr. Lawrence Larsen, of Harlan, will be alternate.

Wapello

The speaker at the March 1 meeting of the Wapello County Medical Society to be held at 6:30 p.m. in the Ottumwa Hospital, will be Dr. Oscar P. Hampton, Jr., of St. Louis, Missouri. His topic will be "Prevention of Tetanus and Gas Gangrene."

Webster

Dr. Emerson B. Dawson was named president of the Webster County Medical Society at the annual business meeting on December 16. Other officers named for 1955 include Dr. D. S. Egbert, vice-president; Dr. J. F. Vincent, secretary-treasurer; Dr. E. M. VanPatten, executive council member; Drs. C. J. Baker and H. H. Allen, delegates; and Drs. Herbert Kersten and Frank Larsen, alternates. All of them practice in Fort Dodge.

Woodbury

Dr. P. L. Bettler became president of the Woodbury County Medical Society at a meeting held in mid-December. Dr. M. A. Blackstone was chosen president-elect; Dr. Joe M. Krigsten, vice-president; Dr. V. R. Heimann, secretary-treasurer; Drs. W. E. Cody and J. N. Lande, censors; and Drs. Wayland Hicks, A. Q. Johnson, Frank McCarthy, Robert Mugan and P. D. Knott, delegates.

Wright

On December 9, the 1955 officers of the Wright County Medical Society were chosen. They include: Dr. Robert Young, Clarion, president; Dr. D. K. Benge, Dows, vice-president; and Dr. J. R. Christensen, Eagle Grove, secretary.

KANSAS HEART CONFERENCE

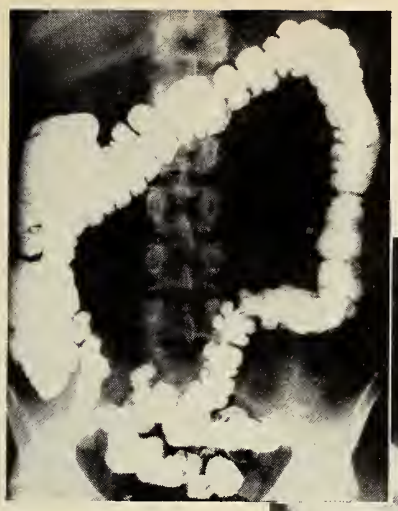
The Ninth Annual Heart Conference presented by the University of Kansas School of Medicine, in cooperation with the state medical society, state board of health and heart association of that state and the heart association of western Missouri, will take place in Kansas City, Kansas, on February 10 and 11.

The faculty is to consist of Mariano M. Alimurung, M.D., of the College of Medicine at the Santo Tomas University, Philippine Islands; H. K. Hellerstein, M.D., of Western Reserve University; L. N. Katz, M.D., of Michael Reese Hospital, Chicago; H. I. Russek, M.D., of New York Medical College and the U.S.P.H.S.; Isaac Starr, M.D., of the University of Pennsylvania; and G. L. Curran, M.D., A. M. Diehl, M.D., E. G. Dimond, M.D., S. Grisolia, M.D., C. A. Hardin, M.D., C. F. Kittle, M.D., and K. R. Resismann, M.D., of the University of Kansas.

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair	L. H. Ahrens, Fontanelle	A. J. Gantz, Greenfield	A. S. Bowers, Orient
Adams	C. L. Bain, Corning	J. C. Nolan, Corning	J. C. Nolan, Corning
Allamakee	M. F. Kiesau, Postville	D. W. Dohnalek, Waukon	D. W. Dohnalek, Waukon
Appanoose	A. S. Owca, Centerville	R. L. Fenton, Centerville	E. F. Ritter, Centerville
Audubon	W. H. Halloran, Audubon	P. E. James, Audubon	L. E. Jensen, Audubon
Benton	L. W. Koontz, Vinton	N. C. Knosp, Belle Plaine	N. C. Knosp, Belle Plaine
Black Hawk	G. A. Bairnson, Cedar Falls	Jean LePoidevin, Waterloo	Craig D. Ellyson, Waterloo
Boone	G. H. Sutton, Boone	F. N. Johnson, Boone	R. L. Wicks, Boone
Bremer	R. E. Shaw, Waverly	R. P. Hardwig, Waverly	F. R. Sparks, Waverly
Buchanan	J. F. Loeck, Independence	J. W. Barrett, Independence	P. J. Leehey, Independence
Buena Vista	R. E. Mailliard, Storm Lake	T. E. Shea, Storm Lake	H. E. Farnsworth, Storm Lake
Butler	M. D. Enna, Dumont	F. F. McKean, Allison	F. F. McKean, Allison
Calhoun	W. W. Weber, Pomeroy	R. A. Lynberg, Lake City	G. S. Rost, Lake City
Carroll	Paul D. Anneberg, Carroll	J. M. Tierney, Carroll	J. R. Martin, Carroll
Cass	L. L. Long, Atlantic	E. M. Juel, Atlantic	R. M. Needles, Atlantic
Cedar	H. E. O'Neal, Tipton	O. E. Kruse, Tipton	H. E. O'Neal, Tipton
Cerro Gordo	J. W. Lannon, Mason City	R. C. Brown, Mason City	H. G. Marinos, Mason City
Cherokee	H. J. Fishman, Cherokee	J. B. Blair, Cherokee	C. E. Broderick, Cherokee
Chickasaw	A. L. Murphey, Fredericksburg	E. C. O'Connor, New Hampton	M. J. McGrane, New Hampton
Clarke	C. R. Harken, Osceola	H. N. Boden, Osceola	G. I. Armitage, Osceola
Clay	C. C. Jones, Spencer	E. E. Munger, Spencer	C. C. Jones, Spencer
Clayton	E. G. Kettelkamp, Monona	T. W. Lichter, Edgewood	P. R. V. Hommel, Elkader
Clinton	J. E. O'Donnell, Clinton	R. O. Emmons, Clinton	V. W. Petersen, Clinton
Crawford	M. U. Broers, Schleswig	R. A. Huber, Charter Oak	R. M. Johnson, Denison
Dallas-Guthrie	Grace M. Sawyer, Woodward	W. C. Wildberger, Perry	W. A. Seidler, Jr., Jamaica A. M. Cochrane, Perry
Davis	C. D. N. Gilfillan, Bloomfield	W. D. Haufe, Bloomfield	H. J. Gilfillan, Bloomfield
Decatur	W. N. Doss, Leon	E. E. Gamet, Lamoni	E. E. Gamet, Lamoni
Delaware	R. E. Clark, Manchester	J. E. Tyrrell, Manchester	R. E. Clark, Manchester
Des Moines	Robert Moerke, Burlington	Robert Rowley, Burlington	F. D. Winter, Burlington
Dickinson	P. A. Scott, Spirit Lake	Ruth F. Wolcott, Spirit Lake	Ruth F. Wolcott, Spirit Lake
Dubuque	A. C. Pfoll, Dubuque	J. W. Moberly, Dubuque	D. F. Ward, Dubuque
Emmet	G. B. Johnston, Esterville	C. V. Lindholm, Armstrong	C. K. Kirkegaard, Esterville
Fayette	J. P. Gallagher, Oelwein	R. S. Jaggard, Oelwein	A. F. Grandinetti, Oelwein
Floyd	E. V. Ayers, Charles City	R. A. Fox, Charles City	E. V. Ayers, Charles City
Franklin	W. W. Taylor, Sheffield	A. P. Smith, Hampton	W. L. Randall, Hampton
Fremont			Kenneth Murchison, Sidney
Greene	W. E. Chase, Rippey	J. I. Limburg, Jr., Jefferson	E. D. Thompson, Jefferson
Grundy	W. K. Kienzle, Wellsburg	L. E. Frink, Reinbeck	E. A. Reedholm, Grundy Center
Hamilton	J. L. Ptacek, Webster City	D. C. Anderson, Stanhope	B. F. Howar, Webster City
Hancock-Winnebago	A. H. Dulmes, Klemme	John Enggas, Britt	T. J. Irish, Forest City
Hardin	John Sear, Alden	F. N. Cole, Iowa Falls	L. F. Parker, Iowa Falls
Harrison	Hans Hansen, Logan	F. X. Tamisiea, Missouri Valley	A. C. Bergstrom, Missouri Valley
Henry	K. P. Beebe, Mt. Pleasant	R. B. Widmer, Winfield	W. H. Megordon, Mt. Pleasant
Howard	D. O. Maland, Cresco	P. A. Nierling, Cresco	P. A. Nierling, Cresco
Humboldt	I. T. Schultz, Humboldt	I. H. Shohet, Bode	I. T. Schultz, Humboldt
Ida	E. H. Heilman, Ida Grove	J. B. Dressler, Ida Grove	M. W. Grubb, Galva
Iowa	L. A. Miller II, North English	I. J. Sinn, Williamsburg	C. F. Watts, Marengo
Jackson	F. J. Swift, Jr., Maquoketa	L. B. Williams, Maquoketa	F. J. Swift, Maquoketa
Jasper	L. H. Koelling, Newton	L. D. Norris, Newton	J. W. Ferguson, Newton
Jefferson	F. H. McClurg, Fairfield	Chris Palcheff, Fairfield	J. W. Castell, Fairfield
Johnson	R. C. Hardin, Iowa City	J. S. Greenleaf, Iowa City	E. J. Boyd, Iowa City
Jones	T. M. Redmond, Monticello	R. W. Myers, Monticello	T. M. Redmond, Monticello
Keokuk	E. R. Gann, Sigourney	A. M. Harwood, Sigourney	R. G. Gillett, Sigourney
Kossuth	D. L. Bray, Algona	J. M. Schutter, Algona	M. G. Bourne, Algona
Lee	G. J. McMillan, Ft. Madison	Sebastian Ambery, Keokuk	J. H. Ashline, Keokuk R. L. Feightner, Ft. Madison
Linn	C. H. Stark, Cedar Rapids	R. C. Locher, Cedar Rapids	H. J. Jones, Cedar Rapids
Louisa	J. H. Chittum, Wapello	K. T. DeYarman, Morning Sun	L. E. Weber, Wapello
Lucas	R. C. Gutch, Chariton	R. E. Anderson, Chariton	A. L. Yocum, Chariton
Lyon	H. H. Gessford, George	S. H. Cook, Rock Rapids	S. H. Cook, Rock Rapids
Madison	R. W. Carson, Winterset	J. E. Evans, Winterset	J. E. Evans, Winterset
Mahaska	G. W. Bennett, Oskaloosa	L. F. Catterson, Oskaloosa	G. S. Atkinson, Oskaloosa
Marion	K. D. Banks, Knoxville	T. D. Clark, Knoxville	H. L. Bridgeman, Knoxville
Marshall	D. D. Harris, Marshalltown	H. E. Sauer, Marshalltown	R. C. Carpenter, Marshalltown
Mills	W. A. DeYoung, Glenwood	T. E. Shonka, Malvern	W. A. DeYoung, Glenwood
Mitchell	Wm. E. Owen, St. Ansgar	R. H. Huber, Osage	T. E. Blong, Stacyville
Monona	P. G. Ingham, Mapleton	P. L. Wolpert, Onawa	C. W. Young, Onawa
Monroe	R. A. Smith, Albia	H. J. Richter, Albia	W. S. Chester, Albia
Montgomery	R. S. Smith, Red Oak	G. M. Skallerup, Red Oak	E. L. Croxdale, Villisca
Muscatine	B. W. Swayze, Muscatine		L. H. Whitmer, Muscatine
O'Brien	L. J. Sweeney, Sanborn	W. S. Balkema, Sheldon	E. B. Getty, Primghar
Osceola	E. S. Aeilts, Sibley	F. M. Rizzo, Sibley	F. M. Rizzo, Sibley
Page	E. N. Bossingham, Clarinda	K. V. Jensen, Clarinda	C. H. Flynn, Clarinda
Palo Alto	R. D. Workman, Ruthven	C. C. Moore, Emmetsburg	H. L. Brereton, Emmetsburg
Plymouth	H. L. Vander Stoep, Le Mars	F. C. Bendixen, Le Mars	H. L. Vander Stoep, Le Mars
Pocahontas	E. O. Loxterkamp, Rolfe	C. L. Jones, Gilmore City	C. L. Jones, Gilmore City
Polk	D. C. Wirtz, Des Moines	T. A. Bond, Des Moines	M. T. Bates, Des Moines
Pottawattamie	W. O. Griffith, Council Bluffs	I. J. Hanssmann, Council Bluffs	C. V. Edwards, Council Bluffs
Poweshiek	S. D. Porter, Grinnell	L. C. Hickerson, Brooklyn	S. D. Porter, Grinnell
Ringgold	G. H. Rodgers, Mt. Ayr	J. W. Hill, Mt. Ayr	G. H. Rodgers, Mt. Ayr
Sac	J. W. Gauger, Early	John Hubiak, Odebolt	C. E. Lierman, Lake View
Scott	J. R. Shorey, Davenport	A. B. Hendricks, Davenport	P. A. White, Davenport
Shelby	Joseph Spearing, Harlan	R. E. Donlin, Harlan	A. J. Ryan, Harlan
Sioux	E. N. Enneboe, Hawarden	C. B. Murphy, Alton	M. O. Larson, Hawarden
Story	W. R. Bliss, Ames	W. B. Armstrong, Ames	J. D. Conner, Nevada
Tama	L. G. Schaeferle, Gladbrook	A. J. Havlik, Tama	A. J. Havlik, Tama
Taylor	R. W. Boulden, Lenox	G. W. Rimel, Bedford	R. W. Boulden, Lenox
Union	J. B. Gault, Creston	H. J. Peggs, Creston	H. J. Peggs, Creston
Van Buren	R. E. Olsen, Milton	J. T. Worrell, Keosauqua	Kiyoshi Furumoto, Keosauqua
Wapello	D. G. Emanuel, Ottumwa	E. B. Hoeven, Ottumwa	P. D. McIntosh, Ottumwa
Warren	C. A. Trueblood, Indianola	R. C. McGeehon, Indianola	L. E. Hooper, Indianola
Washington	T. M. Mast, Washington	W. S. Kyle, Washington	G. E. Montgomery, Washington
Wayne	L. B. Calbreath, Humeston	C. F. Brubaker, Corydon	D. R. Ingraham, Sewal
Webster	E. B. Dawson, Fort Dodge	J. F. Vincent, Fort Dodge	C. J. Baker, Fort Dodge
Winneshiek	Garfield Miller, Calmar	M. A. Mochal, Decorah	E. F. Hagen, Decorah
Woodbury	P. L. Bettler, Sioux City	V. R. Heimann, Sioux City	D. B. Blume, Sioux City
Worth	G. S. Westly, Manly	B. H. Osten, Northwood	R. L. Olson Northwood
Wright	Robert Young, Clarion	J. R. Christensen, Eagle Grove	S. P. Leinbach, Belmond

METAMUCIL® IN CONSTIPATION



Normal Colon



Ulcerative Colitis



Atonic Colon

Smoothage in Correction of Colon Stasis

To initiate the normal defecation reflex, the "smoothage" and bulk of Metamucil provide the needed gentle rectal distention.

Once the habit of constipation has been established, due to any of a large number of causes, it becomes a major problem. Self-medication with irritant or chemical laxatives, or repeated enemas, usually causes a decreased, sluggish defecation reflex and may result in its complete loss.

Rectal distention is a vital factor in initiating the normal defecation reflex, and sufficient bulk is thus of obvious importance in restoring this reflex. Metamucil provides this bulk in the form of a smooth, nonirritating, soft, hydrophilic colloid which gently distends the rectum and initiates the desire to evacuate. Metamucil demands extra fluid, imparting even greater smoothage to the intestinal contents.

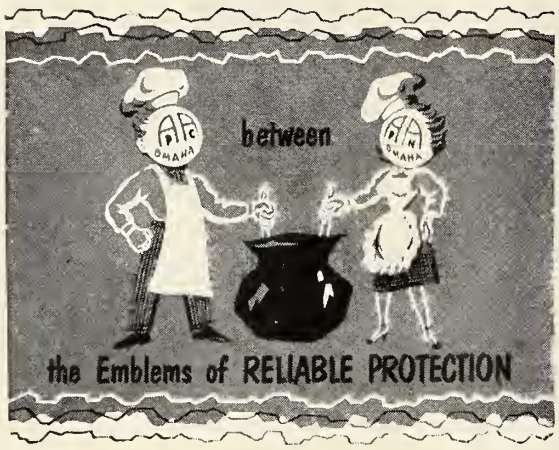
It is indicated in chronic constipation of various types—including distal colon stasis of the "irritable colon" syndrome, the atonic colon following abdominal operations, repressions of defecation after anorectal surgery and in special conditions such as the management of a permanent ileostomy. Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

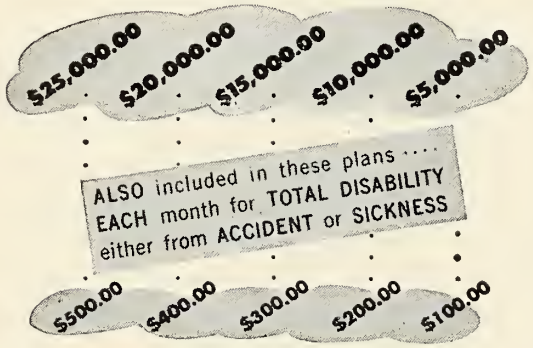
SEARLE

Something NEW is Cooking



MORE INSURANCE NOW AVAILABLE

think! HOW THESE AMOUNTS WOULD HELP IN PAYING ESTATE TAXES IN CASE YOU ARE ACCIDENTALLY KILLED . . .



SPECIFIC BENEFITS ALSO FOR LOSS OF SIGHT, LIMB OR LIMBS FROM ACCIDENTAL INJURY
HOSPITAL INSURANCE also for our members and their families

$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

The Month in Washington

Washington, D. C.—With the 84th Congress well into its first session, all indications point to an active year in medical legislation. Many of the bills will founder somewhere along the way, but as of now, an imposing number are lined up awaiting consideration in Senate and House.

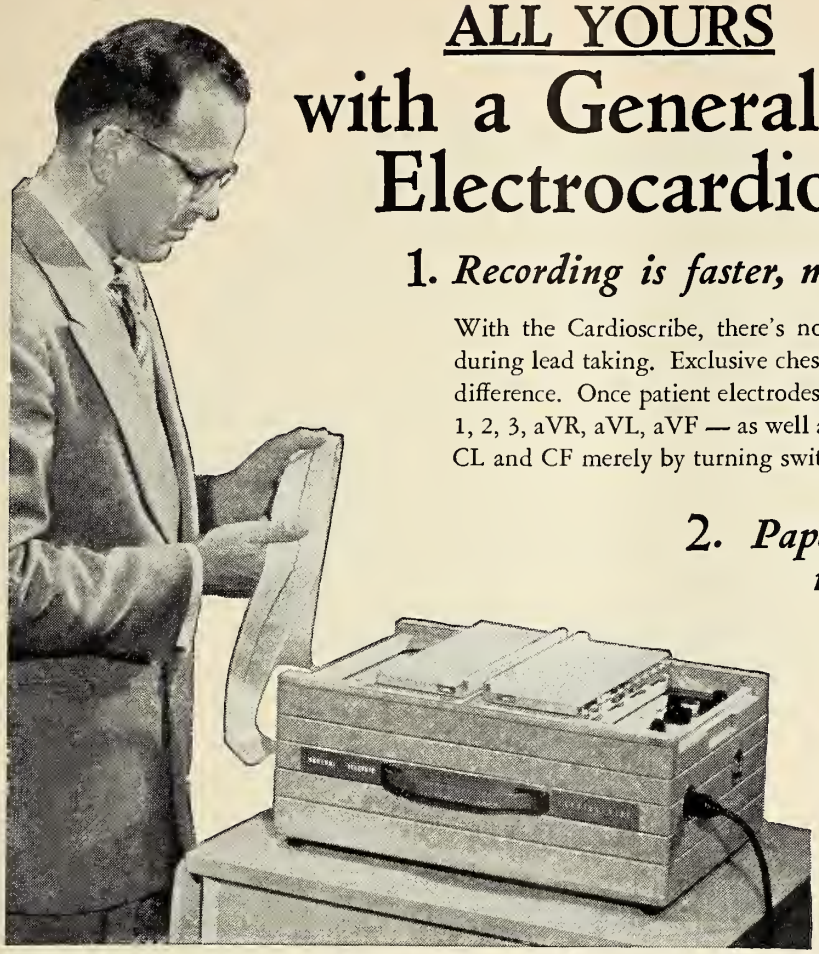
Confirmation that medical problems rank high in the administration's work schedule for Congress came early in January in President Eisenhower's State of the Union Message. This is the address, delivered in person before a joint meeting of Senate and House, in which the President annually outlines in general terms the condition of the country and the new legislation he believes should be enacted.

This message highlighted the President's objectives, but did not tell in specific terms how he expected to reach them. The details came later, in five additional messages to Congress, including one on health on January 24. The President wants Congress to take action on the following health and medical items:

1. A federal health reinsurance service. This idea was rejected by the House last year, but neither Mrs. Hobby nor Mr. Eisenhower has given up hope for it.
2. A plan to insure better and more uniform medical care for public assistance recipients through larger U. S. appropriations and more administrative controls.
3. Federal assistance in construction of health facilities and in providing more trained health personnel (other than physicians).
4. A new federal program to combat mental illness and return more mental patients to useful lives outside institutions.
5. An improved federal program for aiding crippled children and for maternal and child health.
6. Strengthening of the pure food and drug laws to give greater consumer protection.
7. More attention to "the increasingly serious pollution of our rivers and streams and the growing problem of air pollution."
8. An expanded program for the medical care of military dependents.
9. A voluntary health insurance program for federal civilian employees with U. S. contributions and payroll deductions authorized for the employees.

So much for what the Republican President hopes to get through Congress. It is too early to say how much of this program will have the support of Congress, now under Democratic control. It is clear, however, that many leading Democrats want to enact some legislation the President didn't

ALL YOURS with a General Electric Electrocardiograph



1. *Recording is faster, much simpler*

With the Cardioscribe, there's no more fussing with electrodes during lead taking. Exclusive chest lead selector switch makes the difference. Once patient electrodes are in place, you can take leads 1, 2, 3, aVR, aVL, aVF — as well as the 1 to 6 positions at V, CR, CL and CF merely by turning switches.

2. *Paper loading is easier, more accurate*

You'll welcome the advantages built into General Electric's new paper drive. Extremely accurate, it lets you load in the open . . . in seconds! No fumbling inside the case . . . nothing to disassemble. Just flip open the hinged door, pull out the paper drive, load, and snap back into place.

3. *Cabinet offers extra convenience, safety*

Here's truly functional design! The Cardioscribe is a flat, easily handled package. Control covers open wide at a touch . . . no clumsy catches or locks! No groping for controls! Every dial easily accessible. Its leather handle is attached to the main case. When carried, weight is close to your body . . . just like an overnight bag.

Another distinct Cardioscribe advantage: famous General Electric service from over 70 district and local offices. For full details on the DWB Cardioscribe, call your G-E representative.



Progress Is Our Most Important Product

GENERAL ELECTRIC

Direct Factory Branches:
DES MOINES — 319 11th Street
OMAHA — 1617 Dodge Street

Resident Representatives:
DAVENPORT — W. G. Duerre, 2501 Myrtle St.
WATERLOO — A. A. Silva, 1011 Fletcher Ave.
ANKENY — F. W. Schultz, 526 Kenworthy Drive
SIOUX CITY — J. R. Pesavento, 1117 South Newton

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates, Spring 1955

SURGERY—Surgical Technic, Two Weeks, February 21, March 7
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, March 7
Surgical Anatomy & Clinical Surgery, Two Weeks, March 21
Surgery of Colon & Rectum, One Week, February 28
Basic Principles in General Surgery, Two Weeks, March 28
General Surgery, Two Weeks, April 25; One Week, May 23
Gallbladder Surgery, Ten Hours, April 11
Fractures & Traumatic Surgery, Two Weeks, March 14
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, March 14
Vaginal Approach to Pelvic Surgery, One Week, March 7
OBSTETRICS—General & Surgical Obstetrics, Two Weeks, February 28
MEDICINE—Two-Week Course, May 2
Electrocardiography & Heart Disease, Two Weeks, March 14
Gastroenterology, Two Weeks, May 16
Gastroscopy, Two Weeks, March 21
Dermatology, Two Weeks, May 9
RADIOLOGY—Diagnostic Course, Two Weeks, February 28
Clinical Uses of Radio Isotopes, Two Weeks, April 25
Radium Therapy, One Week, May 23
PEDIATRICS—Intensive Course, Two Weeks, April 4
Clinical Course, Two Weeks, by appointment
Cerebral Palsy, Two Weeks, June 20
UROLOGY—Two-Week Urology Course, April 18
Ten-Day Practical Course in Cystoscopy every two weeks

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 S. Wood St., Chicago 12, Ill.

POSTGRADUATE COURSES
in
OPHTHALMOLOGY and OTOLARYNGOLOGY

April 4, 5, 6, 7 & 8, 1955

Guest Instructors:

JAMES H. ALLEN, M.D., Tulane University of Louisiana.
BERNARD BECKER, M.D., Washington University.
NOAH D. FABRICANT, M.D., University of Illinois.
LELAND G. HUNNICUTT, M.D., University of Southern California.
ALEXANDER R. IRVINE, JR., M.D., University of Southern California.
RAYMOND E. JORDAN, M.D., University of Pittsburgh.

* * * * *

ANESTHESIOLOGY

April 11, 12, & 13, 1955

Guest Instructors:

WESLEY BOURNE, M.D., McGill University.
ALBERT FAULCONER, M.D., The Mayo Clinic.
DONALD E. HALE, M.D., The Cleveland Clinic.
L. JENNINGS HAMPTON, M.D., Yale University.
DANIEL C. MOORE, M.D., The Mason Clinic, Seattle.
B. B. SANKEY, M.D., St. Luke's Hospital, Cleveland.
C. R. STEPHEN, M.D., Duke University.
ROBERT W. VIRTUE, M.D., University of Colorado.
CHARLES POKORNY, M.D., The Hertzler Clinic, Halstead, Kans.

* * * * *

For program announcement and information, write:

Extension Program in Medicine

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE

Kansas City 12, Kansas

include in his program. In the early weeks of the session they introduced scores of bills to carry out their ideas.

Federal aid to medical education is prominent in the plans of many of the Democrats, and some of the Republicans. The bills cover a wide range, some restricted to construction grants, but others offering help in meeting operating expenses and incentives to increase the number of students. Other bills offer federal grants to voluntary health plans to subsidize coverage of the indigent, the "medically indigent," the unemployed and the aged. Because the administration has declared itself opposed to subsidies, it is unlikely that any measures of this type will win the support of Mrs. Hobby's department and the White House.

Members on both sides of the aisle also are proposing greater emphasis on research seeking the causes and cures of such diseases as cancer, heart disease, mental illness and arthritis. Some of these bills fit in with the Eisenhower program and philosophy, and are likely to have White House support at the hearings.

This tendency to stimulate more basic medical research, both at the federal level and through state grants, may be an important factor when Congress gets around to passing the appropriation bills for the various Institutes of Health, the research arm of U. S. Public Health Service.

Several years ago a Democratic Congress took a serious interest in a bill for federal aid to local public health departments. Some of the influential Democrats have revived this idea, and are working for its passage this session. As expected, the old Truman-Ewing plan for national compulsory health insurance again is before Congress. The first one to introduce a bill along these lines was Rep. John D. Dingell, a sponsor of the original plan. Later, others joined with him in backing the idea, but up to now the open support for it is not extensive on Capitol Hill.

CALIFORNIA COURT UPHOLDS CO-OP

The California supreme court has handed down a decision protecting the right of consumers to operate medical group-practice prepayment plans.

The decision, in the case of the Complete Service Bureau vs. the San Diego County Medical Society, basically extended the position taken by the U. S. Supreme Court in favor of prepaid group insurance within the District of Columbia ten years ago to apply within state boundaries.

A particularly important part of the California decision denied the necessity of compliance with the state's restrictive "Blue Shield" law. Similar laws have prevented the organization of consumer-controlled medical plans in other states.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the JOURNAL, 529-36th Street, Des Moines 12, Iowa.

"Premarin" relieves
menopausal symptoms with
virtually no side effects, and
imparts a highly gratifying
"sense of well-being."

"Premarin"®—Conjugated Estrogens (equine)

SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 **Capacity 200 beds**

Under the Supervision of the Sisters of Mercy

**An Institution for the Study and Treatment
of Nervous and Mental Disorders.**

**Conditioned Reflex and Antabuse Therapy
for Alcoholism**

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director
JAMES D. MAHONEY, M.D., Associate Director **RICHARD B. LEANDER, M.D.**

PERSONALS

The Chamber of Commerce at Boone has chosen **Dr. Donald Michaelson** to be its president.

Life has been made unpleasant for the physicians in Cedar Falls recently by juveniles who have been calling them at night for what they termed "emergency" need for medical attention. No one at the addresses given needed or had called for a doctor.

In mid-December, **Dr. H. E. Farnsworth** was presented a U. S. Junior Chamber of Commerce scroll inscribed with a tribute in recognition of his 35 years of service to the community of Storm Lake. The testimonial dinner at which the scroll was given him was attended by 150 of his friends.

Dr. R. F. Statton, who has practiced at La Porte City since October, 1952, has left there to begin postgraduate study in ophthalmology at SUI.

Stuart C. Cullen, M.D., chairman of the Division of Anesthesiology, **Titus Evans, Ph.D.,** head of the radiation research laboratory, and **Erwin G. Gross, M.D.,** head of pharmacology, all at the College of Medicine, SUI, have been elected fellows of the New York Academy of Sciences.

Dr. W. F. Dean, 94, of Osceola, a Life Member of the Iowa State Medical Society, is the recipient of the 1954 Rotary-Lions service award for his community.

Dr. Albert J. Jongewaard, a commander in the Naval Reserve, studied insect and rodent control at Preventive Medicine Unit No. 1 of the U. S. Naval Air Station in Jacksonville, Florida, during the last two weeks in November.

Dr. W. C. Keettel, of the Department of Obstetrics and Gynecology, and **Dr. F. W. Stamler,** of the Department of Pathology, represented the College of Medicine at SUI on the program of the Iowa section of the Society for Experimental Biology and Medicine, in Iowa City on November 30.

During the last week in November, medical bags were stolen from automobiles belonging to four Council Bluffs physicians, **Drs. Isaac Sternhill, E. B. Floersch, F. E. Marsh, Jr.,** and **Emmett Mathiasen.** They were taken while the cars were in their home driveways or garages, and they were found in vacant lots about town, with most of their contents scattered about them. There was a similar theft, during the next week, from **Dr. Oscar Alden,** at Red Oak. None of his property has been recovered.

In December, **Dr. Robert B. Isham** resumed his practice in Osage after a tour of military service. His duties were at the medical dispensary in Point Magu, California.

Dr. and Mrs. C. A. Henry, of Farson, are taking a three-months vacation in Florida. Dr. Henry is a Life Member of the Iowa State Medical Society.

In a talk he gave at the Rotary Club in Marcus, on December 21, **Dr. W. L. Downing,** of Le Mars, revealed that he took up astronomy as a hobby about a year ago and has found it highly engrossing. His equipment, he said, consists of a low-priced telescope and a number of books on the subject.

Dr. C. T. Bergen, who until recently was associated with the Hampton Clinic, in Hampton, has opened an office for general practice in Northwood.

Dr. R. A. Weybrauch, a Waterloo general practitioner, opened an office in the suburb known as Cedarloo, on January 1. He will continue to serve patients in his downtown location, as well.

Dr. Carroll E. Swanger, who has practiced medicine in Cresco since July, 1953, has associated himself with Drs. David Nyquist and J. J. Shurts, in Eldora.

On January 1, **Dr. Donald E. Tyler** opened an office at Ft. Dodge. He had just completed a residency in internal medicine at SUI.

The Kersten Clinic, at Ft. Dodge, announces the association of **Dr. T. J. Michelfelder,** a dermatologist who practiced previously in New York City. He is a 1945 graduate of Albany Medical College.

Dr. C. L. Heald, a retired Sigourney physician and Life Member of the Iowa State Medical Soci-

PENICILLIN PLUS!

Oral BICILLIN is a penicillin of choice because it is synonymous with plus factors in penicillin therapy. It means assured penicillin absorption through its unique resistance to gastric destruction.[1] It means more prolonged action than soluble penicillins achieve.[1] It means penicillin *plus* delicious taste (Oral Suspension), *plus* convenience of administration (Tablets), *plus* the notable safety of penicillin by mouth.

For *all* these plus factors, prescribe Oral BICILLIN.

1. American Medical Association: New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

TABLETS SUSPENSION

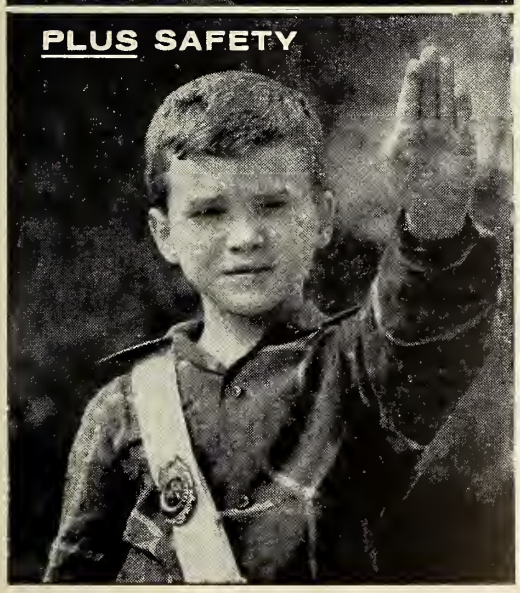
ORAL BICILLIN®

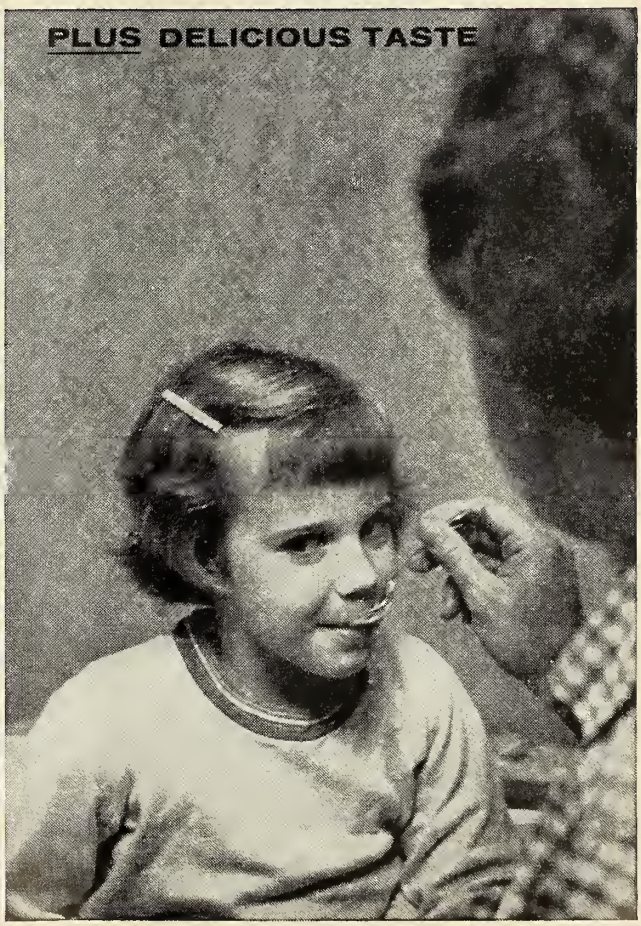
Wyeth® Philadelphia 2, Pa.

Benzathine Penicillin G (Dibenzylethylenediamine Dipenicillin G)

Penicillin with a Surety Factor







ety, underwent surgery on January 3 for the repair of a hip which he fractured in a fall on New Year's Eve.

While he was on his way to make an emergency call, on December 30, **Dr. B. C. Luehrsmann,** of Dyersville slipped on a patch of ice and fell, sustaining a head wound requiring several stitches.

The Hoffman-LaRoche firm has granted SUI $2,500 to subsidize the research of **Dr. I. G. Ponsetti** on curvatures of the spine and disturbances of bone growth. Dr. Ponsetti is an associate professor of orthopedic surgery.

DEATHS

Dr. Gerrit Maris, who practiced at Hull until 1952 and since then has lived in Sioux City, died on January 2, after an illness of about six weeks. Besides being a member of his county, state and national medical societies, he was a fellow of the American College of Surgeons.

Dr. Clinton Ephraim Harris, 79, a Life Member of the Iowa State Medical Society, died at Grinnell on December 15 after a long illness. Though he was a native of the town and began his medical practice there, he spent a considerable part of his professional life in Colorado, because of his wife's poor health. He returned to Grinnell in 1936 and worked there until two years ago.

Dr. Jared D. Kerlin, 90, a member of the Fifty Year Club of the Iowa State Medical Society, died on December 19, at Arlington, Virginia, where he had been visiting. After practicing 52 years in Shenandoah and Whiting, Dr. Kerlin moved to Des Moines and retired in 1939. The cause of his death was a heart ailment.

Dr. Leon Franklin Richardson, 77, who had practiced for 45 years in Collins, died of coronary occlusion on December 18, 1954. He had been in poor health for some time but had carried on his practice up to and even on the day of his death. He was a Life Member of the Iowa State Medical Society.

Dr. John H. Romine, 43, of Webster City, died there on January 17. He had been in ill health since April, 1951, and had been granted a Life Membership in the Iowa State Medical Society.

THE RETREAT HOSPITAL

Des Moines, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
MARTIN J. KRAKAUER, Psychologist

PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist

SYDNEY L. MACMULLEN, Administrator

HERBERT W. VETTER, Asst. Administrator

2801 Woodland Ave. **Phone 5-2121**

PICKER X-RAY CORPORATION
of Iowa

Picker x-ray OF IOWA

DAVENPORT DES MOINES
SIOUX CITY WATERLOO
OMAHA

An Iowa Corporation
To Serve the Profession of Iowa
J. K. DUNN, *Vice President*

SALES
SERVICE
SUPPLIES
X-RAY
AND
ELECTROMEDICAL
EQUIPMENT

AMERICA'S AUTHENTIC HEALTH MAGAZINE

today's health

AMERICAN MEDICAL ASSOCIATION



BUILDS FAITH IN YOU AND YOUR WORK

IN YOUR WAITING ROOM

3 YEARS $6.50 2 YEARS $5.00
1 YEAR $3.00

50 *and seven*

YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

THE RALPH SANITARIUM

A Unit of the Benjamin Burroughs Ralph Foundation for Medical Research

529 HIGHLAND AVENUE TELEPHONE VICTOR 3624 **KANSAS CITY 6, MISSOURI**

Ralph Emerson Duncan, M.D., Director

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
1202 Locust Street Telephone 2-6766

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa

Thursday at 11:15 a.m.

"PHYSICAL MEDICINE"

February 3 .....Physical Treatment in Psychiatry
February 10 .....Skin, Hair and Electrolysis

"THE STORY BEHIND THE DISCOVERY"

February 17 .....Your Life's Blood
February 24 .....The Sheep at Melun

WSUI—Iowa City, Iowa

Tuesday at 11:45 a.m.

"MUSIC WITH YOUR MEALS"

February 1 .....Psychology of Eating
February 8 .....Special Diets
February 15 .....Food Allergies
February 22 .....Food Fads and Fallacies

TELEVISION

KGLO-TV—Mason City, Iowa

Sunday at 5:30 p.m.

February 13 ..What to Do in Case of Emergency
February 27 .....Plastic Surgery

The broadcasts over WOI-TV—Ames, Iowa, are now scheduled to resume in April.

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of January 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland), Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.) .....Lt., U.S.N.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.) .....Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) ..... Capt., A.U.S.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Daut, R. V., Davenport
(Westover Field, Massachusetts) ....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.

Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.

Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.

Dunseth, W. R., Kellogg
(APO San Francisco, Calif.) .....USAF

Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.

Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas) .....1st Lt., A.U.S.

Field, C. A., Cresco
(Manhattan, Kans.) .....Capt., A.U.S.

Frys, Russell N., Iowa City .....

Garred, J. L., Whiting
(San Francisco, Calif.) .....Lt., U.S.N.R.

Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.

Geist, James H., Iowa City .....

Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.

Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.

Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) .....Capt. U.S.A.F.

Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.

Hanske, Edward A., Des Moines
(Camp Gordon, Georgia) .....Capt. U.S.A.H.

Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....

Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.

Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.

Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.

Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....

Jenkins, H. F., Ogden
(Randolph A.F.B., Texas) .....U.S.A.F.

Johnson, M. H., Iowa City
(Manchester, Iowa) ..... Maj., A.U.S.

Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.

Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) .....1st Lt., A.U.S.

Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.

Koptik, George Jr., Garwin.....

Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.

Kuehnle, G. R., Dubuque
(Baton Rouge, La.) .....

Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.

Larson, Gerald E., Elk Horn
(Gunther AFB, Montgomery, Ala.) .....U.S.A.F.

Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.

Lee, R. W., Burlington.....

Marme, George W., DeWitt .....U.S.A.F.

Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.

Maxwell, J. R., Iowa City
(Camp Stoneman, California) .....1st. Lt., A.U.S.

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.,
4003 11th Street Place,
Telephone 3-3804

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

Meyer, Paul G., Manchester
(Ft. Sam Houston, Texas) .....Capt., A.U.S.
Middleton, W. H., Central City
(Bethesda, Maryland) .....U.S.N.R.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Nielsen, G. E., Des Moines
(APO Seattle, Washington) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Perman, Harvey H., Forest City
(Yokasuka, Japan) .....U.S.N.
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfaff, R. A., Dubuque
(Camp Pendleton, Calif.) ..... Lt., U.S.N.R.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Prendergast, L. J., Iowa City
(Oceanside, California) ..... U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Reading, Donald, Iowa City
(U.S. Army Examining Station, Des Moines) .....
Rhode, M. C., Iowa City
(Philadelphia, Pa.)
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Jamaica, New York) ..... Lt., U.S.N.R.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Colorado Springs, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(Bowling Green, Ky.) .....Capt., A.U.S.
Spohnheimer, L. N., Donnellson
(Mountain Home AFB, Idaho) .....1st Lt., USAF
Stivers, T. W., Des Moines
(Hutchinson, Kansas) .....Lt. (jg) U.S.N.R.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Theilen, E. O., Iowa City
(Washington, D. C.) .....Capt. A.U.S.
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Turner, R. M., Armstrong
(Ft. Sam Houston, Texas) .....A.U.S.
Uchiyama, J. K., Des Moines
(Wichita Falls, Texas) .....Capt., U.S.A.F.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wall, J. M., Boone
(Bryan A.F.B., Texas) ..... 1st Lt., U.S.A.F.
Walston, J. H., Graettinger
(Lackland A.F.B., Texas) .....1st Lt., U.S.A.F.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st. Lt., USAF
Workman, R. D., Ruthven
(Omaha, Nebr.) .....U.S.N.
Zeilenga, R. H., Orange City
(Madison. Wisc.) .....1st. Lt., U.S.A.F.
Zoeckler, Samuel J., Des Moines
(Ft. Sam Houston, Texas) .....Capt., A.U.S.

55 #3

CIRCULATION

THE

Journal

OF THE IOWA STATE MEDICAL SOCIETY

CONTENTS

Program, 1955 Annual Meeting of the Iowa State Medical Society 109

Chronic Ulcerative Colitis: Current Therapeutic Considerations
Joseph B. Kirsner, M.D., Chicago, Illinois 119

Treatment of Paroxysmal Tachycardias
L. E. January, M.D., Iowa City 124

Chronic Serous Meningitis: Two Case Reports and a Review of the Literature
Robert M. Blizzard, M.D., Des Moines 127

Agammaglobulinemia
Allan K. Chappell, M.D., Portland, Oregon 132

Mortality Study of Young Diabetic Patients
Donald W. Ortmeyer, M.D., Des Moines, and Robert L. Jackson, M.D., Columbia, Missouri 137

State University of Iowa College of Medicine Clinical Pathologic Conference 144

(Continued on page iv)

Easy to give . . . and to take

ILOTYCIN DROPS

(Erythromycin, Lilly) Ethyl Carbonate

Unexcelled antibiotic spectrum—notably safe

Meets the exacting demands of

Physician—Mother—Baby

Lilly

Another reason to

consider ILOTYCIN FIRST

In this issue: Program for the 1955 Annual Meeting, Des Moines, April 24-27

MARCH, 1955

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV MARCH, 1955 No. 3

CONTENTS

(Continued from page i)

EDITORIALS

1955 Annual Meeting 153
Coordinating Postgraduate Education . . . 153
Medical Uses of Atomic Energy 154
Cost Accounting in an Iowa Hospital . . . 155
Iowa Lags in AMEF Gifts 156

SPECIAL DEPARTMENTS

Coming Meetings 118
President's Page 157
Iowa Academy of General Practice . . . 158
The Doctor's Business 159
Blue Cross-Blue Shield 160
The Journal Book Shelf 161
State Department of Health 162
Woman's Auxiliary News 165
Speakers' Bureau Schedules 168
County Societies, Meetings 169
Mental Illness 170
The Month in Washington xviii
Personals xxii
Deaths xxiv
Roster of Iowa Physicians in Military Service . xxvii

MISCELLANEOUS

Surgical Heart Disease 123
"Prescription for Medical Partnerships" . . 156
American Goiter Association 156
SUI Psychiatrists Test Sedative 164
New Antibiotic Shows Great Promise . . . 168
Fluid Loss in Infants Needs Watching . . . xx
Nominations Invited xxiv
Iowa-Nebraska Medical Assembly xxvi
Ob. & Gynec. Boards, Pt. II xxvi
Film on Lung Cancer xxvii

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
MISS MARY L. MCCORD, Business Manager..Des Moines
MR. EDWARD W. HAMILTON, Assistant Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

WENDELL L. DOWNING, M.D., Trustee.....Le Mars
GEORGE H. SCANLON, M.D., Trustee.....Iowa City
FRED STERNAGEL, M.D., Trustee.....West Des Moines
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio*, Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

IOWA STATE MEDICAL SOCIETY

Organized in 1850

1955 Annual Meeting

April 24-27

VETERANS MEMORIAL AUDITORIUM—DES MOINES, IOWA

Program of General Sessions

To Be Held in Meeting Room on Third Floor

Monday Morning, April 25

9:00 Invocation—

Most Reverend Edward C. Daly, O.P.

Address of Welcome—

Dwight C. Wirtz, M.D., Des Moines, President Polk County Medical Society

Response—

Clyde A. Boice, M.D., Washington, Vice-President, Iowa State Medical Society

9:15 President's Address—

Gerald V. Caughlan, M.D., Council Bluffs

9:35 President-elect's Address—

Lonnie A. Coffin, M.D., Farmington

9:45 Awards of Merit

10:00 Erskine Lecture—The Extension of Radical Surgery in the Treatment of Cancer

George T. Pack, M.D., New York

10:30 Recess to visit exhibits

11:00 Treatment of Adolescents—

J. Roswell Gallagher, M.D., Boston

11:30 What Does Blue Shield Mean to You?—

Francis T. Hodges, M.D., San Francisco

12:00 The Diagnostic Approach to a Hemorrhagic State—

Armand J. Quick, M.D., Milwaukee

Tuesday Morning, April 26

9:00 Complications of First Stage Labor and Their Management—

Roy E. Nicodemus, M.D., Danville, Penna.

9:30 Indications for Surgical Treatment of Vaginal Relaxation, Uterine Prolapse, and Retrodisplacement of the Uterus—

E. Stewart Taylor, M.D., Denver

10:00 Pathology of Pulmonary Lesions—

James B. McNaught, M.D., Denver

10:30 Recess to visit exhibits

11:00 You Are the AMA—

Elmer Hess, M.D., Erie, Penna.

11:30 Present Day Management of Colles Fracture—

Lee T. Ford, Jr., M.D., St. Louis

12:00 Plastic Surgery of the Head and Neck of Interest to General Practitioners—

Dean M. Lierle, M.D., Iowa City

Wednesday Morning, April 27

9:15 Hematuria—

Charles C. Higgins, M.D., Cleveland

9:45 Useful Heart Operations—

Dwight E. Harken, M.D., Boston

10:15 Carcinoma of the Lung—

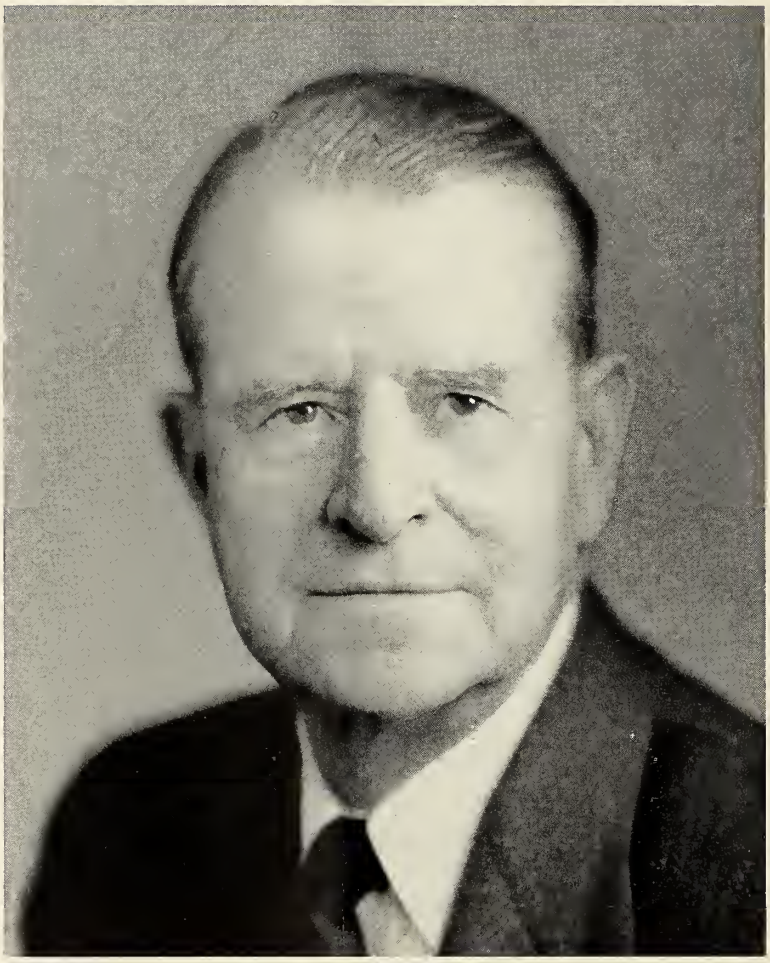
Fay H. Squire, M.D., Chicago

10:45 Recess to visit exhibits

11:15 Emergency Medical Service in a Disaster—

Harold C. Lueth, M.D., Evanston

11:45 Report of House of Delegates—Installation of President



GERALD V. CAUGHLAN, M.D.
President
Iowa State Medical Society
1954-1955

Program of Section Meetings

MEDICAL SECTION

Alonzo L. Jenks, Jr., M.D., Des Moines
Chairman

Large Meeting Room—Third Floor
Veterans Memorial Auditorium

Monday, April 25

2:00 Gerontology and the General Practitioner—

Steven Horvath, Ph.D., Iowa City

2:30 Newer Knowledge of Common Hereditary Bleeding Diseases—

Armand J. Quick, M.D., Milwaukee

3:00 Recess to visit exhibits

3:30 An Addison-Disease-Like State Induced in Normal Volunteers—

William B. Bean, M.D., Iowa City

4:00 Chronic Alcoholism—A Program of Successful Management—

Robert C. Larimer, M.D., Sioux City

4:30 Problems in the Management of Hepatitis—

Forest H. Coulson, M.D., Burlington

Tuesday, April 26

2:00 Treatment of Various Stages of Dermatitis—

Christian E. Radcliffe, M.D., Iowa City

2:30 Radiologic Management of Patients With Gastrointestinal Hemorrhage—

Fay H. Squire, M.D., Chicago

3:00 Current Trends in the Management of Arthritis—

Daniel A. Glomset, M.D., Des Moines

3:30 Recess to visit exhibits

4:00 Modern Management of Hypertension—

Irving J. Hanssmann, M.D., Council Bluffs

4:30 Recent Developments in Diabetes—

Richard V. McKay, M.D., Dubuque

SURGICAL SECTION

J. Philip Cogley, M.D., Council Bluffs
Chairman

Committee Room A
Veterans Memorial Auditorium

Monday, April 25

2:00 Surgical Treatment of Tumors of the Liver—

George T. Pack, M.D., New York

2:30 Surgical Lesions of the Small Bowel—

Elwood P. Russell, M.D., Burlington

3:00 Problem of Ano-rectal Tumors—

Harold F. Trafton, M.D., Council Bluffs

3:30 Recess to visit exhibits

4:00 Silent Cholelithiasis—

Oswald C. Hardwig, M.D., Waverly

4:30 Primary Inguinal Hernioplasty—

Richard E. Paul, M.D., Des Moines

Tuesday, April 26

2:00 Recent Advances in Heart Surgery—

Dwight E. Harken, M.D., Boston

2:30 Operative Choliangiography in Problems of the Biliary Tract—

John A. Gius, M.D., Iowa City

3:00 Recess to visit exhibits

3:30 Replacement Prosthesis for Fractures of the Neck of the Femur—

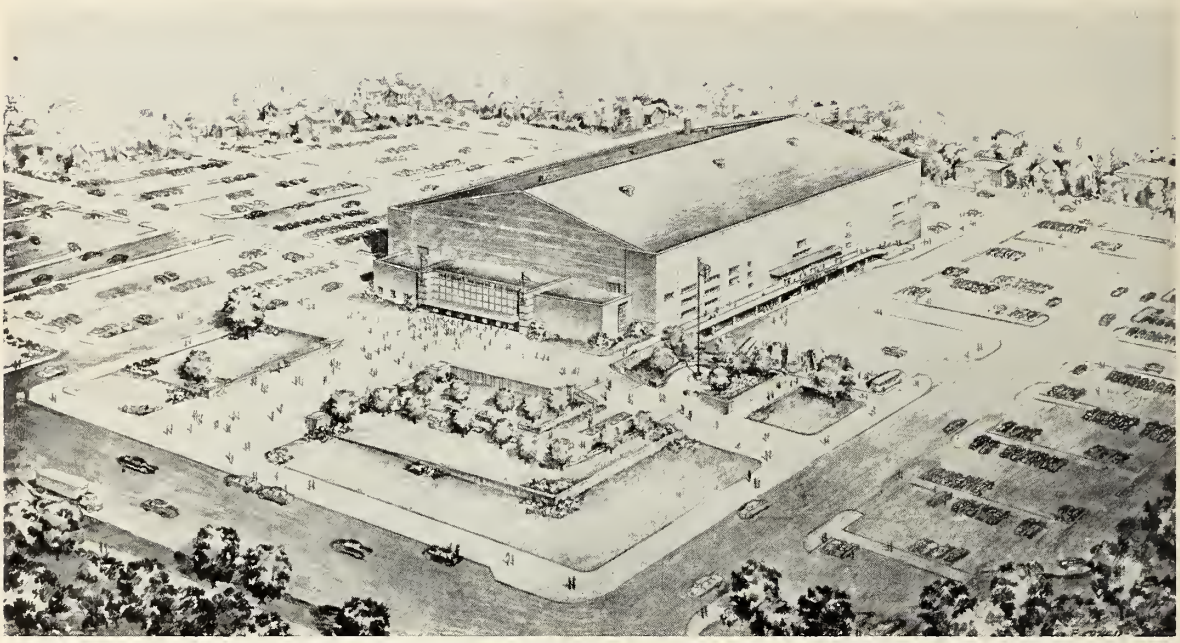
Lee T. Ford, Jr., M.D., St. Louis

4:00 The Choice of Gastric Surgery on a Physiologic Basis—

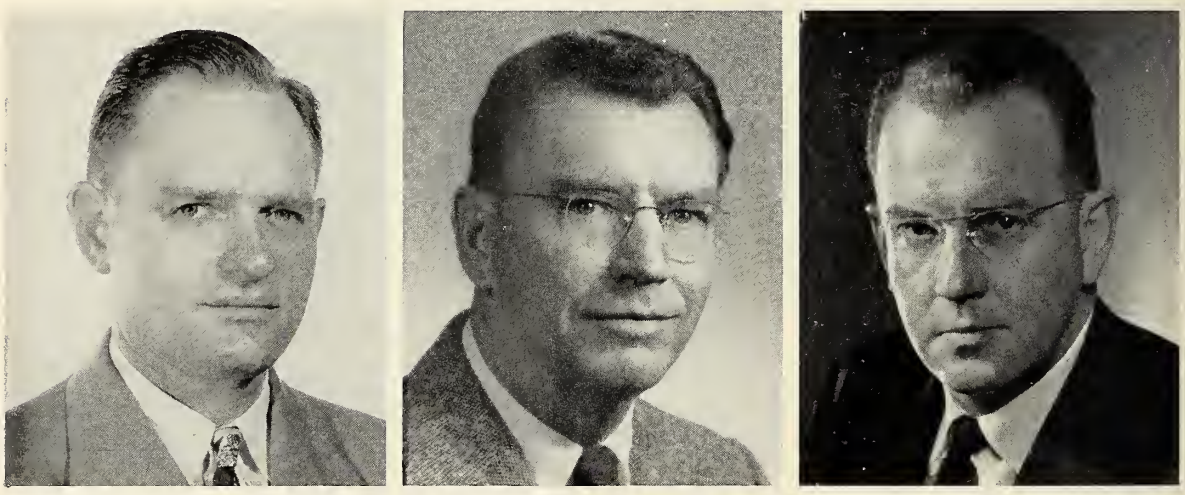
Harry H. McCarthy, M.D., Omaha

4:30 Gastro-esophageal Hiatal Hernia—Diagnosis and Treatment—

Anthony H. Kelly, M.D., Sioux City



Veterans Memorial Auditorium, Des Moines



Lee T. Ford, Jr., M.D., (left) instructor in orthopedic surgery, Washington University School of Medicine, St. Louis. J. Roswell Gallagher, M.D., (center) assistant clinical profesor of pediatrics, Harvard Medical School, and chief of the Adolescent Unit, Children's Medical Center, Boston. Dwight E. Harken, M.D., (right) associate clinical professor of surgery, Harvard Medical School, surgeon, Peter Bent Brigham Hospital, and chief of thoracic surgery, Mt. Auburn Hospital, Boston.

Program of Section Meetings

EYE SECTION

Arthur H. Downing, M.D., Des Moines
Chairman

Committee Room C
Veterans Memorial Auditorium

Monday, April 25

2:00 Some Aspects of Macular Degeneration—
Frank W. Newell, M.D., Chicago

2:45 Statistics on 100 Cases of Retinal Detachment Surgery—
Alson E. Braley, M.D., Iowa City

3:15 Recess to visit exhibits

3:45 Problem of Convergence Insufficiency in Private Practice—
Joseph E. Dvorak, M.D., Sioux City
Discusser: Arthur C. Wise, M.D., Iowa City

4:15 Role of the Vitreous in Several Eye Diseases—
Edward E. Anderson, M.D., Davenport
Discusser: Carl A. Noe, M.D., Cedar Rapids

EAR, NOSE AND THROAT SECTION

Jack V. Treynor, M.D., Council Bluffs
Chairman

Committee Room C
Veterans Memorial Auditorium

Tuesday, April 26

2:00 Rehabilitation of Cleft Lip and Cleft Palate Patients—
Dean M. Lierle, M.D., Iowa City
Discusser: William C. Huffman, M.D., Iowa City

2:30 The Role of the Lingual Tonsil in Focal Infection—
Francis P. Quinn, M.D., Dubuque

3:00 Recess to visit exhibits

3:30 The General Practice of Otolaryngology—
Oral L. Thorburn, M.D., Ames

4:00 Hi-Fidelity and Its Relation to Hearing—
James E. Reeder, Jr., M.D., Sioux City

PEDIATRIC SECTION

Carl A. Hanson, M.D., Waterloo
Chairman

Committee Room B
Veterans Memorial Auditorium

Monday, April 25

2:00 Various Aspects of Adolescence—
J. Roswell Gallagher, M.D., Boston
Discusser: Preston E. Gibson, M.D., Davenport
2:45 Psychiatric Adolescent Problems—
Hunter H. Comly, M.D., Iowa City
3:05 Recess to visit exhibits
3:35 Juvenile Delinquency—
Mr. Carl B. Parks, Chief Probation Officer, Polk County, Iowa
4:00 Pre-adolescent and Adolescent Gynecology—
William C. Keettel, M.D., Iowa City

OBSTETRIC SECTION

Lawrence G. Carrigg, M.D., Cedar Rapids
Chairman

Committee Room B
Veterans Memorial Auditorium

Tuesday, April 26

2:00 Abruptio Placenta and Its Complications—
E. Stewart Taylor, M.D., Denver
Discusser: Cecil W. Seibert, M.D., Waterloo
2:45 The Management of Pre-eclampsia and Eclampsia—
Roy E. Nicodemus, M.D., Danville
Discusser: Walter J. Balzer, M.D., Davenport
3:30 Recess to visit exhibits
4:00 Anesthesia in the Field of Obstetrics and Gynecology—
Stuart C. Cullen, M.D., Iowa City
Discusser: William G. Kruckenberg, M.D., Cedar Rapids

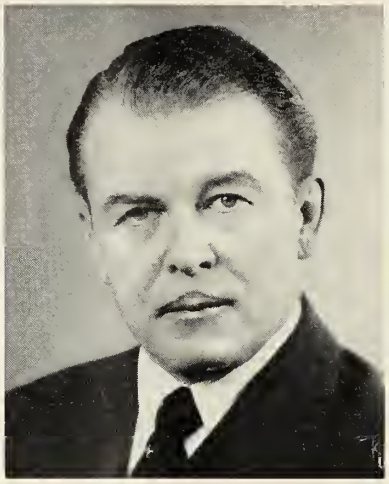
UROLOGIC SECTION

Rubin H. Flocks, M.D., Iowa City
Chairman

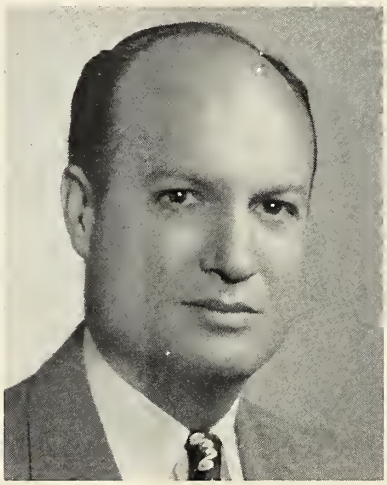
Committee Room D
Veterans Memorial Auditorium

Tuesday, April 26

2:00 Introductory Remarks—
Elmer Hess, M.D., Erie
2:15 Problems in the Diagnosis of Renal Neoplasms—
Raymond G. Bunge, M.D., Iowa City
2:35 Problems in the Management of Congenital Anomalies of the Testes—
Edward M. Honke, M.D., Sioux City
2:55 Recess to visit exhibits
3:25 Role of Cystectomy in Cancer of the Bladder—
Charles C. Higgins, M.D., Cleveland
3:55 Pyelographic Clinic (Members of the Iowa Urological Society)
Charles C. Higgins, M.D., Moderator


Elmer Hess, M.D., (left) president-elect of the AMA, past-president of the American Urological Association, and chief of urology at St. Vincent's and Hamot hospitals, Erie, Pennsylvania. Charles C. Higgins, M.D., (center) chairman of the section on urology of the AMA, past-president of the American Urological Association, and chief of urology, Cleveland Clinic, Cleveland. Francis T. Hodges, M.D., (right) member since 1951 of the National Blue Shield Commission, member of the Prepaid Medical Care Committee of the AAGP, and president, California Physicians Service, San Francisco.


Harold C. Lueth, M.D., (left) formerly dean of the College of Medicine at the University of Nebraska, and now a member of the AMA Council on National Defense, consultant to the Training Coordination Health Office, Federal Civil Defense Administration, and clinical professor of medicine at the University of Illinois College of Medicine, Chicago. Harry H. McCarthy, M.D., (center) professor and director of the Department of Surgery at the Creighton University School of Medicine, and chief of surgery at St. Joseph's and St. Catherine's hospitals, Omaha. James B. McNaught, M.D., (right) president of the American Board of Pathology, past-president of the American Society of Clinical Pathologists and of the American Association of Pathologists and Bacteriologists, and professor of pathology at the University of Colorado Medical Center, Denver.

Special Luncheons and Dinners

Sunday, April 24

STATE SOCIETY OF IOWA MEDICAL WOMEN and BRANCH 19, AMERICAN MEDICAL WOMEN'S ASSOCIATION

The State Society of Iowa Medical Women and Branch 19, American Medical Women's Association, will hold its annual meeting at the home of Dr. Nelle S. Noble, 1060 25th Street, Des Moines, at 7:30 p.m. Sunday evening, April 24. All women who are members of or eligible for membership in the Iowa State Medical Society are invited to attend.

Monday, April 25

IOWA PEDIATRIC SOCIETY

Luncheon—12:45 p.m.
Committee Room B—Auditorium
Reservations: R. E. Dyson, M.D.
3200 University, Des Moines 11

IOWA RADIOLOGICAL SOCIETY

Luncheon—12:45 p.m.
Committee Room D—Auditorium
Reservations: J. T. McMillan, M.D.
1105 Bankers Trust Bldg., Des Moines 9

IOWA SOCIETY OF ANESTHESIOLOGISTS

Luncheon—12:45 p.m.
Committee Room E—Auditorium
Reservations: Leo R. Pearlman, M.D.
1118 Equitable Bldg., Des Moines 9

PAST PRESIDENTS' LUNCHEON

12:45 p.m.
Committee Room F—Auditorium

PRECEPTORS' LUNCHEON

12:45 p.m.
Arena Floor—Auditorium

BLUE SHIELD

Board of Directors' Breakfast
Parlors A & B, Hotel Savery
8:00 a.m.

Participating Physicians
Annual Meeting—5:00 p.m.—Committee Room A

Tenth Anniversary Social Hour and Buffet Supper
Grand Ball Room, Terrace &
Des Moines Rooms, Hotel Savery
6:30-9:00 p.m.

Tuesday, April 26

IOWA OBSTETRICAL SOCIETY

Luncheon—12:45 p.m.
Committee Room B—Auditorium
Reservations: L. G. Carrigg, M.D.
1860 First Ave. N.E., Cedar Rapids

IOWA ORTHOPEDIC SOCIETY

Luncheon—12:45 p.m.
Committee Room E—Auditorium
Reservations: R. M. Wray, M.D.
358 Pleasant Drive, Cedar Rapids

IOWA UROLOGIC ASSOCIATION

Luncheon—12:45 p.m.
Committee Room D—Auditorium
Reservations: R. J. McNamara, M.D.
Roshek Building, Dubuque

IOWA SOCIETY OF MEDICAL TECHNOLOGISTS

Luncheon—12:45 p.m.
Committee Room F—Auditorium
Program—Morning and Afternoon

IOWA ACADEMY OF GENERAL PRACTICE

Luncheon—12:45 p.m.
Arena Floor—Auditorium
Reservations—Mrs. Elizabeth Nelson
3600 Franklin, Des Moines

ANNUAL BANQUET

Grand Ball Room—Hotel Fort Des Moines
Dinner—7:00 p.m.

House of Delegates

Open to all members

First Meeting—Sunday, April 24, 2:00 p.m.

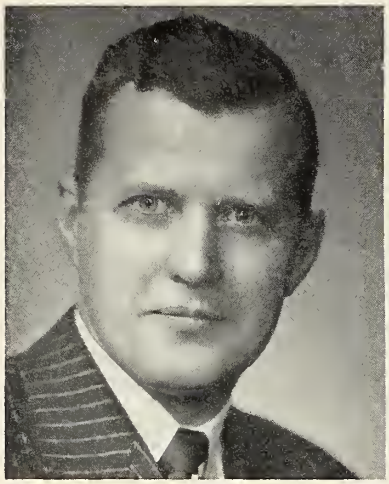
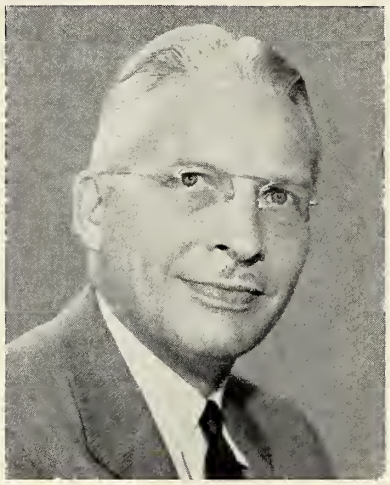
Committee Room A—Veterans Memorial Auditorium

Roll Call
Approval of minutes of special meeting, December 12, 1954
Reports of Officers
Reports of Committee Chairmen
Memorials and Communications
New Business
Election of Committee on Nominations

Second Meeting—Wednesday, April 27, 7:30 a.m.

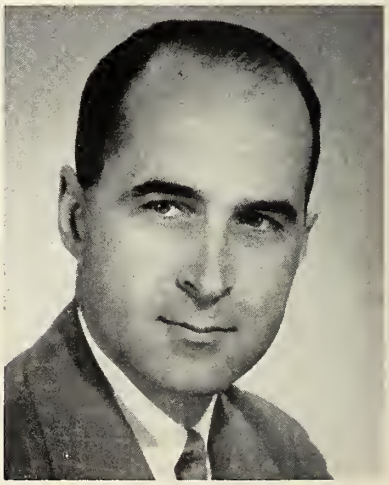
Committee Room A—Veterans Memorial Auditorium

Roll Call
Reading of minutes
Report of Committee on Nominations
Election of Officers
Reports of Committees
Unfinished Business
New Business
Announcement of Committees
Adjournment


Frank W. Newell, M.D., (left) chairman of the Section on Ophthalmology, University of Chicago School of Medicine, Chicago. Roy E. Nicodemus, M.D., (center) chief of the Department of Obstetrics and Gynecology, Geisinger Memorial Hospital and Foss Clinic, Danville, Pennsylvania. George T. Pack, M.D., (right) member of the Pack Medical Group, clinical professor of surgery at the New York Medical College and at the Cornell University Medical College, and attending surgeon at Memorial Hospital, New York City.





Armand J. Quick, M.D., (left) professor of biochemistry at the Marquette University School of Medicine, Milwaukee. Fay H. Squire, M.D., (center) professor of radiology at the Rush Medical College of the University of Chicago, and director of the Department of Radiology at Presbyterian Hospital, Chicago. E. Stewart Taylor, M.D., (right) professor and head of the Department of Obstetrics and Gynecology at the University of Colorado School of Medicine, Denver.

List of Scientific Exhibitors

From the State University of Iowa College of Medicine

Department of Surgery

Hypoparathyroidism—By E. E. Mason, M.D., R. T. Soaper, M.D., and J. A. Buckwalter, M.D.

Causes of Respiratory Difficulties in the New Born & Children—By J. L. Ehrenhaft, M.D., R. E. Taber, M.D., and R. W. Read, M.D.

Spontaneous Pneumothorax—By J. L. Ehrenhaft, M.D., R. E. Taber, M.D., and M. S. Lawrence, M.D.

Operative Cholangiography—By J. A. Gius, M.D., R. C. Hickey, M.D., and C. J. Johnson, M.D.

Congenital Diseases Obstructing the Distal Alimentary Canal—By R. C. Hickey, M.D., and M. N. Jurayj, M.D.

Diseases of the Cardio-Esophageal Junction—By R. E. Taber, M.D., J. L. Ehrenhaft, M.D., and A. E. Devine, M.D.

Hydrocephalus—By G. E. Perrett, M.D., and G. R. Nowlis, M.D.
(Co-sponsored by Division of Neurosurgery)

Department of Urology

Benign Hyperplasia of the Prostate

Carcinoma of the Prostate

Congenital & Pediatric Urological Problems

Urethroplasty—Johanson-Denis Browne Technic

Department of Otolaryngology

Cleft Palate Rehabilitation—By Wm. H. Olin, D.D.S., M.S.D.

Department of Radiology

Neonatal G.I. Tract Abnormalities Demonstrable by X-ray—By N. A. Gremel, M.D., and E. F. Van Epps, M.D.

State Hygienic Laboratory, Hygiene and Preventive Medicine

Two Vial Method (For the Laboratory Diagnosis of Amebiasis and Other Intestinal Parasitic Infections)—By R. E. Evans, Ph.D., and K. MacDonald, Ph.D.

Division of Maternal and Child Health, State Dept. of Health and Dept. of Pediatrics

The Child Guidance Team in Pediatric Education—By H. H. Comly, M.D., P. E. Baer, Ph.D., and I. B. Snyder, M.S.S.

Psychopathic Hospital

Movie

Department of Internal Medicine

Role of the Cardiovascular Laboratory in a General Hospital—By G. N. Bedell, M.D., J. W. Culbertson, M.D., W. M. Kirkendall, M.D., and J. B. Wilde, M.D.

Department of Ophthalmology

Glaucoma

Departments of Dermatology and Syphilology, and Physical Medicine and Rehabilitation

Physical Therapy in Dermatology—By C. E. Radcliffe, M.D., and W. D. Paul, M.D.

General

Medical Administration
State University of Iowa Hospitals

Iowa Chapter of the Arthritis & Rheumatism Foundation

No title

From the State University of Iowa College of Dentistry

Department of Oral Surgery

Oral Lesions

From the Veterans Administration Hospital, Iowa City

Surgical Service

Resection of Abdominal Aortic Aneurysm and Replacement of Homograft—By E. S. Brintnall, M.D., and S. H. Walker, M.D.

Medical Service and Department of Internal Medicine, SUI

Methods of Diagnosis and Treatment of Pulmonary Tuberculosis—By G. W. Fridell, M.D.

The Problem of Pericarditis—By D. C. Funk, M.D.

Radioisotope Unit

Radioiodine Studies in Thyroid Disease—By R. E. Peterson, M.D.

Laboratory Service

Micro-Anatomy of the Common Bile Duct and Its Relation to the Pancreas—By K. R. Cross, M.D., and D. F. Rector

From the Veterans Hospital Des Moines

ULCERATIVE COLITIS AND FAMILIAL POLYPOSIS: ONE STAGE TOTAL COLECTOMY—By Louis T. Palumbo, M.D., and George M. Rugtiv, M.D.

PARTIAL GASTRECTOMY WITH OR WITHOUT VAGUS RESECTION FOR DUODENAL ULCER—By Louis T. Palumbo, M.D., T. T. Masur, M.D., and Bernard J. Doyle, M.D.

ABDOMINAL INCISIONS—By Louis T. Palumbo, M.D., and Irving A. Knight, M.D.

CARCINOMA OF THE LUNG—By Paul J. Trier, M.D., and Thomas A. Ware, M.D.

From the State Department of Health

MATERNAL & CHILD HEALTH—By the Division of Maternal & Child Health

HEALTH EDUCATION

SYSTEMIC MYCOSIS IN ANIMALS—Division of Preventable Diseases

From Practicing Physicians

CARE OF THE TRACHEOTOMIZED POLIO PATIENT—Resident staff, Blank Memorial Hospital, Des Moines

ACUTE FOCAL APPENDICITIS—A REVISED CONCEPT—By F. C. Coleman, M.D., Mercy Hospital, Des Moines, T. R. Anderson, M.D., Univ. of Nebraska College of Medicine, and J. R. Schenken, M.D., Methodist Hospital, Omaha.

RADIOLOGIC STUDIES—By James T. McMillan, M.D., Des Moines

1. VASCULAR SHUNTS—2. MITRAL COMMISSUROTOMY—3. THE COMPRESSED HEART—By Harry H. McCarthy, M.D., Omaha

Other Exhibits

MEDICAL EDUCATION—By Audio-Digest Foundation, Glendale, California

THE VOCATIONAL REHABILITATION OF IOWA'S DISABLED—By the Division of Vocational Rehabilitation

A PROGRAM FOR PHYSICALLY HANDICAPPED HOMEMAKERS—By the Iowa Heart Association

CANCER RESEARCH—By the Iowa Division, American Cancer Society

Two exhibits—Iowa Society of Medical Technologists

Exhibit—Iowa Pharmaceutical Association

Exhibit—Iowa State Nurses' Association

THE PRACTICING PHYSICIAN AND TUBERCULOSIS CONTROL—By the Iowa Trudeau Society

REHABILITATION IN POLIOMYELITIS—By the National Foundation for Infantile Paralysis

USEFUL AIDS IN A PROGRAM FOR THE BLIND—By the State Commission for the Blind

Coming Meetings

In State

March 3	Conference on Long Term Illness, Des Moines
March 5-6	Heart Meeting, Methodist Hospital Staff, Des Moines Art Center
March 18-19	Urology for the General Practitioner, SUI, Iowa City
March 24	Symposium on Thyroid Disease, Iowa-Nebraska Medical Assembly, Council Bluffs
April 6	Neurology for the Practitioner, SUI, Iowa City
April 13-14	Annual Meeting, Iowa Tuberculosis and Health Ass'n., Des Moines
April 24-27	Annual Meeting, Iowa State Medical Society, Des Moines
May 19	Heart Symposium, Iowa Academy of General Practice, Des Moines
Sept. 15-16	Annual Meeting, Iowa Academy of General Practice, Des Moines
Oct. 13-14	Joint Meeting, Mississippi Valley and Iowa Trudeau Societies, Des Moines

Out of State

March 1-2	Clinical Hematology, U. of Minn. Continuation Center, Minneapolis
March 1-4	Annual Clinical Conference, Chicago Medical Society, Palmer House
March 3-5	Clinical Diabetes, U. of Minn. Continuation Center, Minneapolis
March 7-8	Pathology of Crime, U. of Kansas School of Medicine, Kansas City
March 7-18	Surgical Technic, Cook Co. Grad. Sch. Med., Chicago
March 10-12	Hematology, U. of Kansas School of Medicine, Kansas City
March 14-16	Pediatrics, U. of Kansas School of Medicine, Kansas City
March 14-25	Fractures and Traumatic Surgery, Cook Co. Grad. Sch. Med., Chicago
March 14-25	Electrocardiography & Heart Disease, Cook Co. Grad. Sch. Med., Chicago
March 21-24	Electrocardiography, U. of Kansas School of Medicine, Kansas City
March 21-April 2	Surgical Anatomy & Clinical Surgery, Cook Co. Grad. Sch. Med., Chicago
March 21-23	Cardiovascular Symposium, U. of Minn. Continuation Center, Minneapolis
March 21-April 1	Gastroscopy, Cook Co. Grad. Sch. Med., Chicago
March 28-April 8	General Surgery, Cook Co. Grad. Sch. Med., Chicago
March 28-31	Scientific Assembly, American Academy of General Practice, Los Angeles
March 31-April 2	Emergency Surgery, U. of Minn. Continuation Center, Minneapolis



Current Therapeutic Considerations in

Chronic Ulcerative Colitis

JOSEPH B. KIRSNER, M.D.

CHICAGO, ILLINOIS

CLINICAL FEATURES

Ulcerative colitis is an acute and chronic disease of the large bowel, characterized clinically by bloody diarrhea, fever, abdominal pain, anorexia, weight loss and anemia, and by numerous complications. At proctoscopy, in approximately 95 per cent of cases, the mucosa of the rectum and sigmoid is diffusely hyperemic, edematous, granular and friable, with multiple bleeding points. The rectal lumen may contain bloody fluid and mucopurulent exudate. The principal roentgen features are loss of haustral markings, stiffness and narrowing of the colon, irregular pseudo-polypoid mucosal pattern, marginal serration and ulceration. These changes involve the colon partially or completely, but in perhaps 20 per cent of cases the bowel appears normal roentgenologically, despite the presence of an active colitis.

The incidence of ulcerative colitis is comparatively low; yet it is not an uncommon disease. Increased awareness of it and more frequent proctoscopic and X-ray examinations probably would reveal more cases than are now recognized. The diagnosis of ulcerative colitis is established by the characteristic proctoscopic and roentgen findings and by careful examination of the feces to exclude specific pathogenic bacteria and parasites. Ulcerative colitis occurs most often in young adults between the ages of 20 and 40, but it may develop at any age. Females predominate slightly, but the sex differential is not striking. Ulcerative colitis is not infective or transmissable, and its occurrence in more than one member of a family is rare. Though there is no seasonal trend in the onset of the disease, recurrences are more frequent during the fall and winter months than during the summer, perhaps because of upper respiratory tract infections. The illness may occur in previously healthy individuals, or it may develop in chronologic association with respiratory and enteric infections, operations, physical fatigue and nervous tension.

Dr. Kirsner is a member of the Department of Medicine at the University of Chicago.

ETIOLOGY

Despite extensive investigation, the etiology of ulcerative colitis remains obscure. The many causes that have been postulated include allergy, nutritional deficiency, lymphatic obstruction, lack of "protective" enzymes, overproduction of destructive enzymes, metabolic disorders, neurogenic and psychogenic disturbances, and bacterial or viral infections. We have observed alterations in the ground substance of the connective tissue of the bowel, such as might be attributable to "collagen disorders." However, conclusive evidence of such a relationship has not been adduced. Multiple factors undoubtedly are involved, including infection of the colon, vasospasm and tissue ischemia of neurogenic or psychogenic origin, and possibly the action of mucolytic and proteolytic enzymes within or upon the mucosa of the colon.

COURSE AND COMPLICATIONS

Ulcerative colitis is a chronic disease, with unpredictable remissions and relapses of variable duration and severity. The tendency to recurrence and the many complications necessitate frequent, prolonged and expensive hospitalizations. The complications developing locally in the colon include stricture, polyps, carcinoma, hemorrhage, obstruction, fistula formation, abscesses, perforation and peritonitis. The systemic complications include anemia, arthritis, electrolyte and fluid depletion, nutritional deficiencies, degenerative and inflammatory changes in the liver, pancreas and kidney,

skin disorders, and, less frequently, erythema nodosum, iritis and amyloidosis.

THERAPY

General Principles. In the absence of known etiology and pathogenesis, the treatment of ulcerative colitis is largely symptomatic, individual and prolonged. Medical therapy seems indicated in 80 or 90 per cent of cases. The immediate goals are adequate rest, restoration of normal function of the colon, elimination of infection, improvement of nutrition and satisfactory control of the emotional problems present in the majority of patients, if not in all of them.

Initial treatment in the hospital permits more complete observation of the patient than would otherwise be possible, and facilitates the establishment of an effective dietary, medicinal and psychotherapeutic program. Adequate relaxation and rest may be accomplished through a combination of skillful nursing care, long hours of sleep, pleasant recreation and occupational therapy. Sedatives, especially barbiturates such as phenobarbital (0.03 Gm., four times daily) and bromides (elixir triple bromides, one teaspoon four times daily) are also helpful. Sleep at night may be facilitated by Seconal, Tuinal, Nembutal, chloral hydrate and similar compounds. Antispasmodics are useful in decreasing colonic hypermotility. Tincture of belladonna (10 drops four times daily) and atropine sulfate orally (0.0005 Gm., several times each day) have long been prescribed for this purpose. Many new antispasmodics, including Banthine, Prantal, Pamine, Pro-Banthine, Monodral, Antrenyl, Darstine, Lusyn, Elorine and Centrine, are now available and occasionally are effective; however, the individual responses and clinical tolerances for these drugs vary greatly. Severe abdominal cramping pain and rectal tenesmus temporarily may require the use of deodorized tincture of opium (10 drops two or three times daily), codeine sulfate (0.03 Gm., four times daily), demerol (100 mg.) or morphine (0.015 Gm.). However, opiates should not be prescribed routinely or for long periods. Heat to the abdomen with a hot water bottle or an electric heating pad for periods of one or two hours after meals also helps to relieve the abdominal discomfort. The excellent response achieved occasionally with conventional medical therapy is illustrated in the following case.

CASE 1

B. Z., a young adult woman with hay fever and asthma, had noted symptoms of ulcerative colitis since May, 1948, following the disappearance of her father. Various studies demonstrated severe ulcerative colitis, with malnutrition and hypoproteinemia. Therapy with a high protein diet, sedatives and sulfonamides relieved symptoms partially. The addition of deodorized tincture of opium and antihistaminics later was accompanied by further improvement. In 1949, the colitis subsided completely and, except for mild recurrences related to upper respiratory infections, the patient has remained well to the present time. She attributes the improvement to the emotional tranquility achieved through a happy marriage and through extensive theological reading.

PSYCHOTHERAPY

A thorough understanding of the patient's emotional difficulties and skillful attention to those problems are indispensable to the effective treatment of ulcerative colitis. The permanent value of formal psychotherapy in eliminating the psychogenic defects of the ulcerative colitis patient is not clearly established. Nevertheless, the approach frequently is helpful. Formal psychotherapy is indicated chiefly in the seriously disturbed patient. On the other hand, caution and skill are necessary during the active stages of the disease, for the patient then is not able to deal effectively with the psychogenic problems. The resulting conflicts may precipitate serious recurrences of the disease, or may increase its severity. In general, the most helpful psychotherapy is administered by the interested, sympathetic and well-informed attending physician, constantly providing encouragement, support and reassurance for the patient. Supportive psychotherapy may be highly effective, as in the following case.

CASE 2

R. K., a 16-year-old boy, developed ulcerative colitis in March, 1947. Many hospitalizations and various types of therapy elsewhere had been ineffective, and total colectomy was recommended. In 1949, physical examination, laboratory studies, and the proctoscopic and X-ray findings indicated severe colitis of the entire large bowel. Symptoms subsided partially during therapy with a bland diet, sedatives, antispasmodics, several blood transfusions and sulfaguanidine. Significant clinical improvement first became apparent several weeks after a series of daily interviews with a skillful woman psychiatrist, and it was maintained during the subsequent four months of the patient's hospitalization. Psychotherapy has been continued during the following five years. The patient has remained in excellent health and is now a tall, well-developed young man entering college on a scholarship. Proctoscopy and X-ray findings indicate a normal colon. The patient takes no medication, and his diet is unrestricted.

DIET

A bland, low-residue diet, without the mechanical and chemical irritants contained in fruits, vegetables, fruit juices, condiments, alcoholic beverages and extremely hot or cold foods, decreases the ab-

dominal distress and the diarrhea. Cooked fruits and vegetables are added later, when the bowel movements are consistently formed and do not contain blood. On the other hand, dietary restrictions are undesirable in the undernourished, nutritionally-depleted patient who requires large amounts of protein and carbohydrates. The diet usually should contain 120 to 150 Gm. protein and from 2,500 to 3,500 calories daily. Protein supplements and vitamin concentrates also are desirable in many instances. Transfusions of whole blood are indicated for the correction of anemia and hypoproteinemia. Iron compounds by mouth tend to increase the abdominal distress and diarrhea, and therefore, are not prescribed routinely. Isotonic saline, 5 per cent glucose in saline or Ringer's solution may be required intravenously for the correction of electrolyte and fluid depletion.

SULFONAMIDES

Sulfonamides are prescribed to control secondary infection and in the hope of eliminating unidentified bacterial causes of the disease. Sulfonamides decrease the total bacterial counts in the feces by eliminating the coliform organisms, changing the fecal flora from gram positive to predominantly gram negative. Beneficial clinical effects are observed initially in many cases, but the results frequently are neither consistent nor reproducible. Bacterial resistance and drug sensitivity may also develop, further handicapping attempts at chemotherapy. Among the many compounds available, sulfaguanidine (8.0 Gm., daily), Azulfidine (4.0 Gm.), sufadiazine (2-4 Gm.) and sulfathalidine (4-6 Gm., daily) have appeared to be most effective, in our experience, but the individual clinical response is quite variable. The following unusual case illustrates the remarkable results of chemotherapy. In most patients, the response is neither as striking nor as consistent.

CASE 3

E. F., a single, adult female, had developed ulcerative colitis soon after the sudden death of both her parents. Ten years later, at the time of her first examination at the University of Chicago Clinics, her entire colon and the adjacent ileum were involved. Prolonged hospitalization and the use of sedatives, antispasmodics and nutritional supplements were not helpful. However, symptomatic and proctoscopic evidence of the disease subsided soon after the oral administration of sulfaguanidine, 10 Gm., daily. Discontinuance of the medication invariably resulted in recurrence of the disease, and, conversely, resumption of sulfaguanidine in quantities of only 1.0 or 0.5 Gm., daily, always induced remission of symptoms. Subsequently, the development of a dermatitis necessitated the termination of sulfaguanidine. Symptoms recurred within several weeks, and active colitis was observed proctoscopically. Sulfathalidine, 6.0 Gm., daily, had no beneficial effect. Special tablets of sodium bicarbonate represented to the patient as sulfaguanidine were equally ineffective. Symptoms once more subsided rapidly when sulfaguanidine was readministered in quantities of 0.5 or 1.0 Gm., daily. The patient apparently remains well and has not returned for reexamination in several years.

ANTIBIOTICS

Penicillin (1 to 2 million units daily) and streptomycin (1.0 Gm., daily) are administered together for the same reason as the sulfonamides. The antibacterial effects of Aureomycin, Chloromycetin, Terramycin, Neomycin and Polymixin-B on the fecal flora in ulcerative colitis resemble those of the sulfa drugs. The clinical response to these compounds occasionally is excellent. However, these antibiotics may cause disturbing gastrointestinal side effects, including glossitis, stomatitis, nausea, flatulence, diarrhea, perianal itching and a type of proctitis and colitis clinically and proctoscopically resembling the "average" ulcerative colitis. The "antibiotic colitis" may be resistant to therapy, occasionally necessitating prolonged hospitalization. Consequently, antibiotics are not prescribed routinely for ulcerative colitis. Newer compounds may prove more consistently effective and less troublesome than currently available antibiotics.

CORTICOTROPHIN AND CORTISONE

Corticotrophin (ACTH) and cortisone do not specifically cure ulcerative colitis, prevent recurrences or replace established methods of treatment. Nevertheless, the hormones are useful *adjuncts* when administered in sufficient amounts and under carefully controlled conditions. The improvement is similar to that observed without the steroids, but it is more frequent and more rapid in its development. The initial doses are, for ACTH, 30 units intramuscularly every six hours (120 units per day), and for cortisone, 75 mg. four times daily (300 mg. per day). Subsequent reductions in dosage are determined by the response and course of the individual patient. Steroid therapy may be continued for several weeks or several months, and occasionally treatment is maintained for one to several years. Corticotrophin intravenously, 20 mg. in 500 ml. of 5 per cent glucose in distilled water, administered every 12 hours, controls symptoms very effectively in patients not responding adequately to intramuscular ACTH. Longer-acting corticotrophin gel intramuscularly, 40 to 80 units once or twice a day, may relieve symptoms adequately, with fewer injections than are required with the aqueous preparation. The clinical response occasionally decreases during the prolonged or repeated administration of ACTH, perhaps as a

result of local fixation or inactivation of the hormone.

The development of systemic and dermal sensitivity to corticotrophin may require discontinuance of the drug. The complications of steroid therapy inherent in the physiologic properties of the hormones—namely, edema, acne, rounding of the face, hypertension and alkalosis—subside uneventfully when therapy is terminated. The infections occasionally complicating treatment usually are not serious. In our experience, massive hemorrhage, giant ulceration and perforation have not been encountered in the treatment of more than 120 patients. Compound F and cortisone orally, in daily doses of 200 and 300 mg., thus far have been less potent than corticotrophin. The differences probably are quantitative rather than qualitative; larger doses of these hormones may be as effective as corticotrophin. Symptoms recur frequently after ACTH and cortisone, under conditions similar to those prevailing in the absence of the steroids. The importance of ACTH, cortisone and compound F in the management of ulcerative colitis consists chiefly in stimulating improvement or recovery of patients in whom conventional therapy has had a slow effect or none at all. The steroids, as it were, provide an additional opportunity for the effective use of all appropriate medical measures in ulcerative colitis. The nature of the steroid-induced remissions is not known. Specific and non-specific mechanisms may be involved, including alterations in vascular permeability, modifications of tissue response to inflammation and changes in antigen-antibody relationships. In the following patient corticotrophin probably was a decisive factor in reversing the unfavorable trend of the disease.

CASE 4

L. J., a 36-year-old housewife, had experienced severe ulcerative colitis since 1936. Recurrences were related to emotional stress and pregnancy. Treatment with Sulfasuxidine, Chloromycetin, diets and small amounts of cortisone had not been effective. The proctoscopic and roentgen studies indicated severe ulcerative colitis. Therapy in December, 1951, and January, 1952, with several blood transfusions, sedatives, sulfaguanidine and a total of 2,380 units of corticotrophin intramuscularly over a period of 44 days resulted in steady improvement. The bloody diarrhea and abdominal distress subsided, the patient's appetite improved and she gained in weight and strength. Several mild recurrences developed subsequently after excessive physical activity and fatigue, nervousness and upper respiratory infections. In general, however, the patient has remained in excellent health and is living a normal life.

MISCELLANEOUS COMPOUNDS

Amebicidal drugs, isoniazid, antitoxic B. coli serum, antilysozyme compounds, bacteriophage, antidysentery serum and vaccines do not improve the course of the disease consistently or significantly. In our experience, there seems to be no satisfactory rationale for the use of extracts of hog's stomach and intestine, antihistaminics, medicated enemas, anti-thyroid drugs, vitamin B_{12}, cobra venom or parathormone.

SURGERY

Surgical treatment is required in 10 or 15 per cent of patients with ulcerative colitis. The indications are perforation, extensive polyposis, massive hemorrhage, carcinoma, stricture and obstruction, extensive perirectal infection or fistula formation. Operation may be necessary also for persistently severe anemia or rheumatoid arthritis, and for recurrences despite intensive medical therapy. Surgery may be life-saving, as in patients with rapidly progressive fulminating ulcerative colitis. It may be the only means of rehabilitating patients with such irreversible anatomic complications as polyposis or extensive fistula formation. So-called "intractable" ulcerative colitis requires careful scrutiny, for many such cases respond effectively to interested, detailed and prolonged medical management.

Ileostomy alone does not cure ulcerative colitis, for evidence of active disease may be observed proctoscopically 10 or 15 years after the operation. The procedure of choice usually is total colectomy and ileostomy, performed in one or two stages. Advances in medical and surgical care, more effective methods for the restoration and maintenance of electrolytes, fluid and nutritional needs, and chemotherapy have significantly reduced the operative mortality and the morbidity. Total colectomy in one stage is being performed with increasing frequency. Technical improvements in the construction of the ileostomy and in ileostomy appliances have aided greatly in the adjustment of the patient to the procedure; the physical and emotional transformation may be striking. Abdominoperineal resection may be indicated when the rectum is severely diseased and is the source of recurrent hemorrhage and infection. Usually it is the second stage of total colectomy. Segmental resection of the colon with direct anastomosis is justifiable for segmental colitis limited to the cecum, ascending or transverse colon. The procedures of ileoproctostomy and vagotomy appear to be of limited usefulness. Pelvic parasympathetic neurectomy remains to be fully evaluated. The operations of appendicostomy, cecostomy and colostomy have been discarded for ulcerative colitis. The circumstances under which surgery may become necessary are illustrated by the following patient.

CASE 5

P. C., a young married woman, had experienced ulcerative colitis since November, 1947, the onset and the recurrences being related, at least chron-

ologically, to severe emotional tension. The patient was a charming but completely immature and dependent person, terrified over the possibility of pregnancy, yet for religious reasons unwilling to adopt prophylactic measures. She was hospitalized in 1950, several months pregnant and seriously ill. Treatment with blood transfusions, chemotherapy, diet and sedatives was partially helpful. The spontaneous termination of the pregnancy, supportive psychotherapy and ACTH further increased the rate of her recovery, but her symptoms recurred several weeks later. ACTH once more facilitated her improvement in February, and again in October, 1951. Nevertheless, the ulcerative colitis increased in severity, and its response to adrenal steroid and other therapy decreased progressively. Persistent massive hemorrhage from the colon in February, 1952, necessitated the transfusion of more than 6,000 cc. of blood. Numerous drugs, including newer antispasmodic compounds and intravenous corticotrophin, had only transient beneficial effects. The clinical situation finally became desperate, and total colectomy and ileostomy were performed in one stage. The patient recovered uneventfully and subsequently has remained in excellent health. The management of the ileostomy presents no unusual difficulties. For the first time in seven years, the patient is living a practically normal life.

OUTLOOK

Despite the lack of specific therapy, continued advances in the control of infection, in the restoration of nutrition, and in general medical and surgical care have steadily reduced the mortality and the morbidity of ulcerative colitis. Most patients with the disease can be maintained in satisfactory or excellent health by careful, prolonged medical management. At times, there may be remarkable reversibility of the diseased colon to a near-normal or normal state. The progress achieved in recent years encourages hope for more significant therapeutic advances in the not too distant future.

BIBLIOGRAPHY

1. Kirsner, J. B., Palmer, W. L., Maimon, S. N., and Ricketts, W. E.: Clinical course of chronic nonspecific ulcerative colitis. J.A.M.A., **137**:922-928, (July 10) 1948.

2. Marshall, H. C., Jr., Palmer, W. L., and Kirsner, J. B.: Effects of chemotherapeutic agents on fecal bacteria in patients with chronic ulcerative colitis. J.A.M.A., **144**:900-903, (Nov. 11) 1950.

3. Kirsner, J. B., Sheffner, A. L., and Palmer, W. L.: Studies on amino acid excretion in man. V. Chronic ulcerative colitis and regional enteritis. J. Clin. Invest., **29**:874-880, (July) 1950.

4. Kirsner, J. B., and Palmer, W. L.: Effect of corticotrophin (ACTH) in chronic ulcerative colitis. Observations in forty patients. J.A.M.A., **147**:541-549, (Oct. 6) 1951.

5. Moeller, H. C., Marshall, H. C., and Kirsner, J. B.: Lysozyme production in response to injury of gastrointestinal tract in dogs Proc. Soc. Exp. Biol. & Med., **76**:159-161, (Jan.) 1951.

6. Kirsner, J. B., Palmer, W. L., and Klotz, A. P.: Reversibility in ulcerative colitis. Clinical and roentgenologic observations. Radiology, **57**:1-14, (July) 1951.

7. Levine, M. D., Kirsner, J. B., and Klotz, A. P.: New concept of the pathogenesis of ulcerative colitis. Science, **114**:552-553, (Nov. 23) 1951.

8. Kirsner, J. B., Levin, E., and Palmer, W. L.: Use of antibiotics in gastrointestinal disease. A review. Arch. Int. Med., **90**:677-706, (Nov.) 1952.

9. Kirsner, J. B., and Palmer, W. L.: Therapeutic problems in ulcerative colitis. Med. Clin. N. A., **37**:247-259, (Jan.) 1953.

10. Klotz, A. P., Palmer, W. L., and Kirsner, J B.: Aureomycin proctitis and colitis: a report of five cases. Gastroent. **25**:44-47, (Sept.) 1953.

11. Kirsner, J. B.: Treatment of chronic ulcerative colitis. In: Current Therapy, ed. by H. F. Conn, M.D., page 263. Philadelphia, W. B. Saunders Co., 1953.

12. Kirsner, J. B., and Palmer, W. L.: Ulcerative colitis: therapeutic effects of corticotrophin (ACTH) and cortisone in 120 patients. Ann. Int. Med., **41**:232-250, (Aug.) 1954.

Surgical Heart Disease

The program for the Second Annual Cardiovascular Symposium, under the sponsorship of the Department of Internal Medicine at Iowa Methodist Hospital, March 5 and 6, 1955, will have surgical heart disease as its general subject. The chief speakers are to be Dr. Charles T. Dotter, of the Department of Radiology at the University of Oregon, who will discuss "Angiocardiography in Cardiac Diagnosis"; Dr. Thomas J. Dry, of the Division of Medicine at the Mayo Clinic, who will talk on "Mitral Stenosis"; Dr. S. Gilbert Blount, director of the Cardiovascular Laboratory at the University of Colorado, who will discuss "Congenital Heart Disease"; and Dr. C. W. Lillihei, of the Department of Surgery at the University of Minnesota, whose topic will be "Intra-Cardiac Surgery."

The discussions will be led by Dr. Lewis January, from the SUI College of Medicine, Dr. Daniel Connolly, assistant to the staff at the Mayo Clinic, and members of the staff at Iowa Methodist Hospital.

All sessions will be held at the Des Moines Art Center, 4700 Grand Avenue, the Saturday ones beginning at 9:00 a.m. The lunch to be served there will be gratis, and the meeting will resume afterward, lasting through the afternoon. On Sunday morning, March 6, there will be a presentation of cases from the Raymond Blank Guild Heart Station, which will include reports of cardiac catheterization and angiocardiography. These cases will be discussed by the speakers of the day before and by others who are interested.

Programs and invitations will be made available to all physicians in the state.

Treatment of the Paroxysmal Tachycardias

L. E. JANUARY, M.D.

IOWA CITY

THE PAROXYSMAL supraventricular and ventricular tachycardias present problems which must be dealt with promptly if mistakes are to be avoided. In origin, these ectopic cardiac-mechanism disturbances may be auricular, A-V nodal, or ventricular. The auricular and nodal varieties can be grouped together as supraventricular tachycardias, in so far as therapy is concerned. Correct therapy implies correct diagnosis, and usually this is not difficult, often by clinical means alone. Specific identification nearly always is possible with the electrocardiogram.

PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIAS

The vast majority of paroxysmal tachycardias are auricular in origin. They occur preponderantly in persons who have no demonstrable heart disease. An example is shown in Figure 1. Ordinarily, organic cardiac disease should not be inferred when such a tachycardia is the only indication of disturbed cardiac function. Instead, the tachycardia should be controlled as indicated. The patient should be led to think of it as a nuisance, and he should be reassured that he has a sound heart, unless there is evidence to the contrary. If a cause lying outside the heart is apparent, it should be corrected if possible. Tobacco, coffee, low grade infections, thyrotoxicosis and anxiety may be important in this connection. It becomes a matter of emergency when an attack is so prolonged that even a normal heart fails under the continued stress of the rapid rate, or whenever it complicates organic cardiac disease. The object is to recognize the tachycardia early and to interrupt it by the simplest means possible.[1] In most instances, stimulation of the vagal mechanism by one means or another terminates a supraventricular tachycardia.

Dr. January is a member of the staff of the Department of Internal Medicine at the College of Medicine at the State University of Iowa.

Mechanical stimulation of the vagus is the first expedient to be tried. It consists of such simple procedures as breath holding, the Valsalva experiment, drinking cold water, or induced gagging or vomiting. When these fail, the carotid sinus reflex should be stimulated by firm massage over the carotid sinus for 30 seconds, first on the right side and then on the left. Rarely should one massage both sides simultaneously; to do so in treating elderly patients is particularly inadvisable. If the first attempt fails, several minutes should be allowed to elapse between attempts to stimulate the reflex. Pressure on the eyeballs to the point of pain has traditionally been recommended, but it has not been notably successful and there is danger of damage to the eyes.

Drug therapy, if required, should begin with a simple drug, unless an emergency dictates otherwise. Prostigmine (neostigmine), given subcutaneously in a dose of 0.5-1.0 mg., is such a drug. The site of injection should be massaged to facilitate rapid absorption. If the attack is not abruptly terminated by the time the patient notes intestinal cramps, carotid sinus stimulation is attempted again.

Digitalis is very effective, through its action on auricular muscle and the vagal mechanism as well. The *undigitalized* patient is given an intravenous preparation. Lanatoside C (Cedilanid) is preferred because of its rapid action and rapid excretion. A half-digitalizing dose of 0.8 mg.—or, if desired, a near-digitalizing dose approaching 1.6 mg.—often will terminate the attack in 30-60 minutes. Even if it has failed before, carotid sinus stimulation may be useful during this period.

Mecholyl (acetyl-beta-methylcholine) nearly always abolishes an attack. Although generally safe, it has the decidedly disagreeable side effects of flushing, sweating, nausea and vomiting, which limit its use. An adult should not receive an initial dose in excess of 30 mg., administered subcutane-

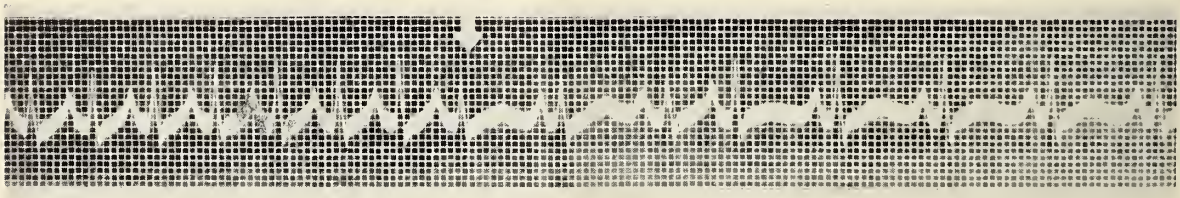


Figure 1. The abrupt termination of a paroxysm of auricular tachycardia is indicated by the arrow. Beyond that point, the rhythm is normal except for one auricular premature beat. The patient had no demonstrable heart disease.

ously. This dose, or larger doses by increments of 10 mg., should not be repeated oftener than every 30 minutes. Upon termination of the tachycardia, the undesirable side effects can be abolished or ameliorated by the intravenous injection of atropine sulfate, 0.5 to 1.0 mg.

Quinidine sulfate often is effective, by means other than vagal stimulation. Given orally, 0.4 to 0.6 Gm. every 2 hours, it ordinarily will abolish the tachycardia after a few hours. It is not the drug of choice unless other means have failed, unless the diagnosis is uncertain, or unless the situation is so urgent that treatment is undertaken before a supraventricular tachycardia is differentiated from a ventricular tachycardia. In such instances, it is definitely indicated.

Prophylaxis against recurrences of paroxysmal supraventricular tachycardia often is necessary. Here, quinidine is most effective because it tends to reduce the frequency of the premature beats which so often initiate attacks. If there is no demonstrable, correctable cause, and if paroxysms are frequent and troublesome, quinidine sulfate in doses of 0.2 to 0.6 Gm. each, at intervals of 4, 6 or 8 hours, is usually safe. The effective dose varies from patient to patient and is gauged by the amount required to prevent recurrences, provided that one stays below an amount producing toxic symptoms. Vertigo, tinnitus, disturbed vision, nausea, vomiting or diarrhea are signals to reduce the dose or discontinue the drug before serious effects upon the respiratory or cardiac systems occur. If quinidine is not tolerated or is ineffective, full digitalization should be tried, followed by a daily maintenance dose. If digitalization is as effective as quinidine, the patient may prefer it because of the simplicity of taking but one dose per day.

PAROXYSMAL VENTRICULAR TACHYCARDIA

Paroxysmal ventricular tachycardia, although much less common than the supraventricular types, usually is indicative of organic cardiac disease. Even when it occurs in a patient without demonstrable disease, it may be an overwhelming emergency. It is a matter of grave concern because of the frequency with which it occurs as a complication of acute myocardial infarction. The mechanical and medicinal means of stimulating the vagal mechanism are ineffective in ventricular tachycardia, and digitalis, with but few exceptions, is contraindicated.

Quinidine remains the drug of choice. We have had a wide experience at University Hospitals in treating paroxysmal ventricular tachycardia by the intravenous injection of quinidine, and we have recently reported our observations elsewhere.[2] Eleven patients with 28 attacks received 32 intravenous injections of quinidine. Twenty-four attacks were terminated either during the injection or within a few minutes afterward. In two instances, normal rhythm was not restored for two or more hours after the last injection. The two remaining attacks were unaffected. One came to an end spontaneously, 10 hours after quinidine had been injected intravenously. In the other, the patient, moribund when treatment was begun, died while the drug was being injected. That catastrophe, under the circumstances, was hardly attributable to quinidine. In fact, most of the patients exhibited none of the toxic effects of quinidine, though mild nausea or vomiting did occur in a few instances.

The results of this study and the experience that we have had since have indicated that the intravenous administration of quinidine is a safe and a highly effective means of terminating paroxysms of ventricular tachycardia in patients who are seriously ill or who cannot tolerate the drug orally. This viewpoint is at variance with the customary warning against its intravenous administration.[3] Certainly, when there is no urgency for abolishing the arrhythmia promptly, quinidine sulfate may be given orally, 0.6 to 0.8 Gm. each two hours, until the attack has been terminated or until toxic symptoms preclude its further use.

If it is to be given intravenously, quinidine gluconate is available in a stable solution in 10 ml. ampules, each containing 0.8 Gm. of quinidine. This quantity should be diluted to 20 ml. with isotonic solution of sodium chloride. The rate of injection should not exceed 1.0 ml. per minute, so that no more than 40 mg. of quinidine is administered each minute. A continuous, direct-writing electrocardiograph tracing should be observed during

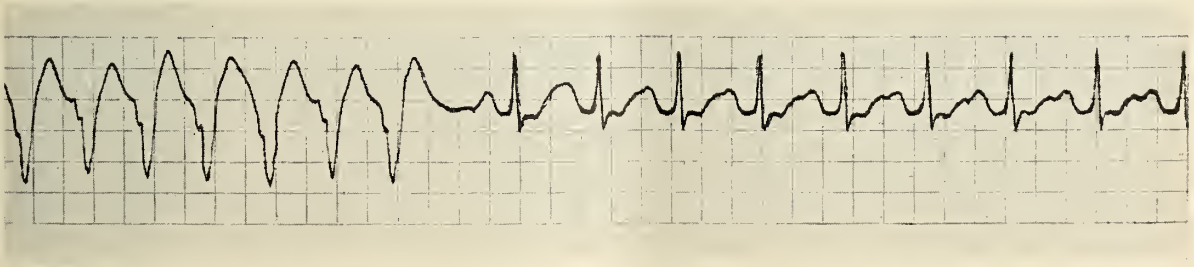


Figure 2. The abrupt termination of a paroxysm of ventricular tachycardia at a rate of 150 per minute after the intravenous injection of quinidine gluconate, 0.26 Gm., administered in 4 minutes. The patient, in shock at the time the injection was begun, improved immediately after termination of the tachycardia.

the injection whenever possible, and the injection should be discontinued upon the restoration of normal rhythm. Otherwise, continuous auscultation of the heart is advisable. Any change in the rhythm or in the quality of the heart sounds serves as an indication to stop the injection. Paroxysmal ventricular tachycardia, unlike the supraventricular tachycardias, may not terminate abruptly by a return to a near-normal heart rate. Instead, the rate may slow gradually, even though sinus rhythm has been restored. Such a change is readily apparent on the electrocardiogram, but may not be so obvious by auscultation.

By rigidly observing the precautions outlined, we have given 0.8 Gm. of quinidine at one injection without undesirable effects. As little as 65 mg. has terminated some attacks. One such attack is shown in Figure 2.

The effectiveness and safety of quinidine administered intravenously has been emphasized, but other drugs are available, notably procaine amide hydrochloride (Pronestyl®), a drug which has a profound quinidine-like action and possesses the same potentially serious side effects. Its chief effect on ventricular muscle is in lengthening conduction time, rather than in altering the refractive period. Pronestyl may be given orally, 0.5 to 1.0 Gm. each 4 hours. If it is to be used intravenously, the rate of injection should not exceed 100 mg. per minute. Usually no more than 1.0 Gm. is administered. This dose may be repeated in 2 to 6 hours. Similar precautions are advisable —i.e., administration under electrocardiographic control or with continuous auscultation of the heart. Injection is discontinued upon restoration of normal rhythm. Since significant hypotension may develop during the administration of this drug, frequent determinations of the blood pressure are indicated. The rate of injection is slowed if hypotension appears.

The administration of either quinidine or Pronestyl may cause an increase in the duration of the QRS complex, but we have not observed this to occur when quinidine was administered by the method suggested. An attack of paroxysmal ventricular tachycardia treated with intravenous Pronestyl is shown in Figure 3. The ventricular rate declined from 158 to 100 per minute before termination occurred, a situation seen also with quinidine, but after 1.0 Gm. of Pronestyl, the duration of the QRS complex increased from 0.13 to 0.18 seconds (46 per cent). The degree to which widening of the QRS complex can be permitted before the injection of either quinidine or Pronestyl is discontinued has not been established, but Sokolow[4] suggests that the QRS duration should not be permitted to increase more than 50 per cent. Theoretically, progressive slowing of the intraventricular conduction may precede complete disruption of the ventricular rhythm, and the production of ventricular fibrillation or ventricular asystole are hazards of overdosage with either drug.

It is not my intention to draw any conclusion regarding Pronestyl on the basis of this observation, but since it is a relatively new drug, physicians seem frequently inclined to use it with undue enthusiasm, under the impression that it is safer than quinidine. Like other cardiac drugs, it may produce serious effects when used without proper precautions, when given in too large doses or when administered to hypersensitive patients.

Either quinidine or Pronestyl can be effective in preventing recurrences of paroxysmal ventricular tachycardia. Oral quinidine sulfate, 0.4 to 0.6 Gm., or Pronestyl, 0.25 to 0.5 Gm., each 4 to 8

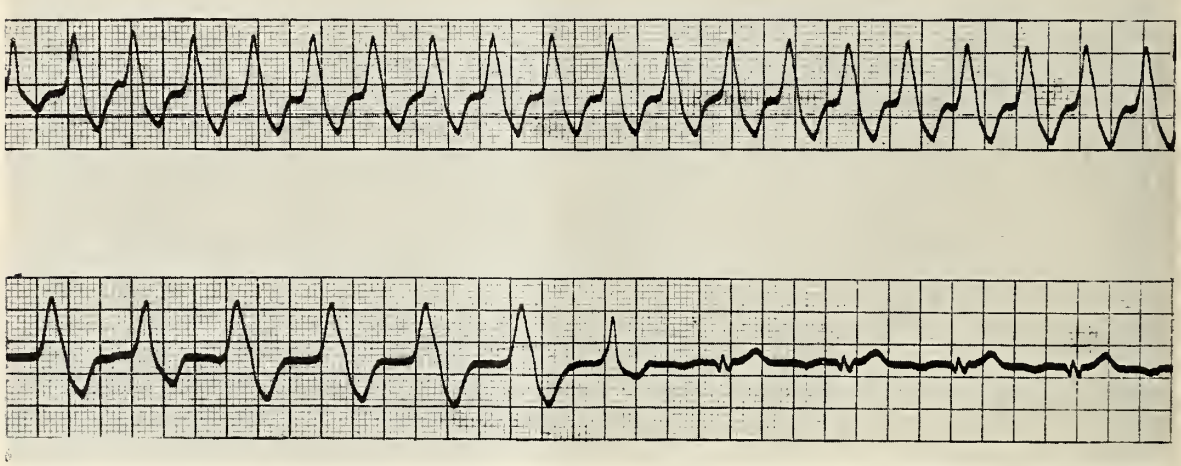


Figure 3. A paroxysm of ventricular tachycardia treated by the intravenous injection of Pronestyl. In the upper tracing, recorded at the beginning of the injection, the ventricular rate was 158 per minute and the QRS duration was 0.13 seconds. In the second strip, just before the abrupt termination of the paroxysm, the rate had declined to 100 per minute and the QRS duration had increased to 0.18 seconds (an increase of 46 per cent). The dosage was 1.0 Gm., administered as 100 mg. per minute.

hours, often suffices. An enteric coated preparation of quinidine sulfate is available, which, if given with the bedtime dose of ordinary quinidine sulfate, may keep the blood level high enough during the night to obviate awakening the patient for medication.

For reasons of completeness, I should mention that if quinidine or Pronestyl fail, magnesium sulfate in 10 per cent solution, slowly administered by the intravenous route in a dose of 10 to 20 ml., may prove effective. More important is the possibility that in those few instances where ventricular tachycardia is associated with digitalis intoxication or with frank hypopotassemia, the cautious administration of potassium by slow intravenous drip may terminate the mechanism when other means have failed. In fact, this may be the preferred therapy under such circumstances.

BIBLIOGRAPHY

1. January, L. E.: Paroxysmal Auricular Tachycardia. In: Current Therapy, ed. by H. F. Conn, p. 129. Philadelphia, W. B. Saunders Co., 1953.

2. January, L. E., Hamilton, H. E., and Sinton, D. W.: Paroxysmal ventricular tachycardia treated with intravenous injections of quinidine. Arch. Int. Med., 91:325-332, (Mar.) 1953.

3. Scherf, D.: Treatment of cardiac arrythmias. Circulation, 8:756-768, (Nov.) 1953.

4. Sokolow, M.: Present status of therapy of cardiac arrythmias with quinidine. Am. Heart J., 42:771-797, (Nov.) 1951.

Chronic Serous Meningitis

Two Case Reports and a Review of the Literature

ROBERT M. BLIZZARD, M.D.

DES MOINES

The purpose of this paper is twofold: (1) to present two additional case histories of the interesting entity most commonly called "chronic serous meningitis," but which has also been given many other names, and (2) to review the literature with the goal of correlating previous case studies, reports and concepts.

HISTORY AND TERMINOLOGY

History and terminology must necessarily be considered together, for the variance in nomenclature is closely associated with the history. Chronic serous meningitis has several similar, but not identical, subtypes, and it is only recently that they have been recognized as divisions or categories. And the confusion as regards the etiology of these similar conditions has also been a factor in the assigning of various names to them.

The first to describe serous meningitis was Quincke (1897) in DEUTSCHE ZTSCHR. F. NERVENH. Not all of his case histories were about true serous meningitis, but most of them did fall into the various related categories. Other authors subsequently described similar entities under other titles. So far as the English literature is concerned, Warrington[1] contributed the first paper of any significance, "Intracranial Serous Effusions of Inflammatory Origin." Next, Horrax[2] (1924) described 33 cases which he called "generalized cisternal arachnoiditis simulating cerebellar tumor." Symonds[3] (1931) described three cases that he called "otitic hydrocephalus." That label was certainly a misnomer, but it is still applied when serous meningitis follows otitis media. Howell[4] (1936) reported several cases which he titled "arachnoiditis," and in the same year Davidoff and Dyke[5] presented 15 cases, reverting to Quincke's term, "serous meningitis." In 1937, Dandy[6] presented 22 cases called "intracranial pressure without brain tumor." McAlpine,[7] in the same year, described five cases which he called "toxic hydrocephalus." His choice of name was unfortunate, for hydrocephalus did not occur, or at least it was not proved. He assumed that it was present because there was an increase in the cerebrospinal fluid pressure. Sahs and Hyndman[8] (1939) presented an excellent review entitled "Intracranial Hypertension of Unknown Cause." In 1940, Lillie[9] described a variant of serous meningitis which he labeled "prechiasmal syndrome produced by chronic local arachnoiditis." Voris[10] (1945) presented six cases under the title "Serous Meningitis," in which he mentioned, in addition to the previously mentioned names, "serous arachnoiditis," "chronic arachnoiditis," "meningitis sympathetica," and "aseptic meningitis." Recently, Ray and Dunbar,[11, 12] in 1950 and again in 1951, have presented a new concept in etiology under the title "Pseudotumor Cerebri." Since the latter article, to the best of my knowledge, the literature has been void of contributions.

CLASSIFICATION

Horrax[2] was the first to attempt a classification of the subentities. He referred to (1) generalized chronic serous arachnoiditis, and (2) chronic circumscribed cystic arachnoiditis, or cystic arachnoiditis, or generalized cisternal arachnoiditis. It

---

Dr. Blizzard is a resident at Raymond Blank Memorial Hospital, in Des Moines, and his paper won first prize in the 1954 Pediatrics Contest.

was the second group in which he was particularly interested, and, even more particularly, with those cases where the lesions are limited to the posterior fossa and simulate cerebellar tumors.

Davis and Haven,[13] in 1925, made the next attempt to classify pseudotumor cerebri. After examining ten specimens, all from localized cystic archnoid lesions, they reviewed their pathologic findings in the arachnoid. They found the arachnoid to be inflammatory in one case, fibrous with thickening in seven cases, and hyperplastic in two cases. The latter group revealed mitotic figures which they felt could have been incipient neoplasm.

Howell[4] made the next attempt at classification when he divided the entity into (1) spinal form, and (2) cerebral form. The spinal form is not mentioned again in the literature, and if such an entity exists, it is much less common than the other. The cerebral form was subdivided into cystic arachnoiditis of (a) the posterior fossa, (b) the optic chiasm, and (c) the cerebral cortex.

Voris,[10] in 1945, presented the most complete and satisfactory classification:

A. Location
   1. Generalized
   2. Localized
      a. Cerebral hemisphere
      b. Optic chiasm
      c. Posterior cistern or fossa
B. Etiology
   1. Otitic
   2. Traumatic
   3. Toxic
   4. Unknown
C. Type
   1. Acute or subacute (inflammatory)
   2. Chronic (fibrous or hyperplastic)

This classification still remains satisfactory, except that several additional etiologic factors have been discovered.

ETIOLOGY

The etiology of serous meningitis has been very elusive. Many factors have been proved, some have been disproved, and some remain questionable. Quincke is said to have thought that influenza, overwork, injury to the head, alcoholism and otitis media were the causes. Some subsequent authors[1, 3] have considered otitis media to be the most common, but others[2, 10, 14] have listed it as no more than sometimes responsible. Symonds[3] felt that lateral sinus thrombosis occurred secondary to otitis media, and he demonstrated two such cases. Influenza and encephalitis[2, 14] have been suggested as possible etiologies. Horrax,[2] in presenting his 33 cases, calls attention to the fact that there appeared to be an increased incidence following the influenza epidemic of 1918. Particularly has encephalitis been implicated in the localized form of the disease.[4, 10] Another hypothesis has been that an increased production of cerebrospinal fluid by the choroid plexus is responsible.[5, 10] In direct contrast, most recently some men[5, 10, 11, 12] have blamed a decreased absorption consequent to an acute thrombosis of either the lateral or the longitudinal sinus. Bronson and Ray,[11, 12, 15] who have done some outstanding work in this field, have actually demonstrated such thrombosis by venography of the longitudinal superior sinus. Since publication of these articles in 1950 and 1951, however, Ray[16] has told me in a personal letter that although initially he had hoped sinus thrombosis would prove to be the etiology of a majority of cases of pseudotumor cerebri, he now knows that it is not, despite the fact that in a gratifying number of patients thrombosis has been the explanation for the increased intracranial pressure. Other causes that have been less seriously considered are syphilis and gonorrhea,[2] pharyngitis and/or sinusitis,[7] toxins[5, 8] (which cause irritation of the meninges and serous effusion), herpes zoster,[17] and 17 other and more obscure etiologies.[14]

It may be accepted that localized arachnoiditis does, on occasion, follow encephalitis, meningoencephalitis and otitis media, and that generalized serous meningitis may definitely follow otitis media, sinusitis, lateral sinus thrombosis and longitudinal superior sinus thrombosis. The other etiologies must be accepted with great reluctance, however, and a large number of the cases have to be considered idiopathic.

INCIDENCE

At one time it was felt that serous meningitis affected only children and adolescents,[3, 7, 8] but most reports include patients above the second decade of life. Horrax[2] reports an age range from 3 to 55 years, Davidoff and Dyke[5] an age range of 4½ to 43 years, and Dandy[6] reports patients from 9½ to 48 years, etc. The sexes appear to be equally represented. Two cases[6] have been reported in Negroes.

SIGNS AND SYMPTOMS

As the name *pseudotumor* implies, the symptoms simulate those of space-occupying lesions. Particularly is this true of the localized type, where the preoperative diagnosis is usually a tumor of the cerebellum, cerebral hemispheres or optic chiasm. The generalized type frequently simulates a space-occupying lesion, too, but localization is pot possible, and the symptoms represent diffuse involvement of the central nervous system.

The most common signs and symptoms[2, 5, 6, 8, 10, 11] found are headache, failing vision, diplopia, papilledema, vomiting and faintness. Other symptoms which vary from patient to patient and which have been reported are tinnitus, facial nerve paresis, bilateral abducens paralysis, hemiparesis, retinal hemorrhages, positive pathologic reflexes, ataxia, convulsions,[11] paresthesias, weakness, nocturia, hallucinations, meningismus,[6, 8] nystagmus and hypotonia. One author[8] disagrees with some of the

symptoms stated (ocular palsies, nystagmus, ataxia, convulsions and symptoms referable to the pyramidal system), saying that they rarely occur. Another[7] states that meningismus is not typical of the disease. In summary, it may be stated that any sign or symptom of the central nervous system, or any group of signs or symptoms, may occur singly or in combination, and that these signs and symptoms may point to localized or generalized involvement of the nervous system.

LABORATORY FINDINGS

The cerebrospinal fluid is characteristically described as having a pressure elevation, usually of a marked degree, a normal cell count, normal chemistries and negative culture.[1, 5, 6, 7, 8, 10] Some authors state that the cerebrospinal fluid pressure may be either normal or elevated, as may be the cell count.[3] Schaltenbrand[17] reports eight cases with the cerebrospinal fluid cell count varying from 100 to 5,000 and having an increase in protein, though he doesn't say how much. Bailey, who has reviewed the article, feels that those cases actually were not serous meningitis. In two large series,[5, 6] one or two cases were reported with a moderate elevation of the cell count.

Skull X-rays are usually normal,[11] unless an internal hydrocephalus has resulted from an occlusion of the foramen magnum by a localized cyst secondary to arachnoiditis.[5]

In most instances, ventriculograms reveal small, undilated, bilaterally equal ventricles.[5, 6, 8, 12] But the ventriculograph technic is often unsuccessful because of the size of the ventricles.[5] Pneumoencephalograms,[8, 11] likewise, are normal, and small ventricles may be seen. A normal pneumoencephalogram is necessary for the exclusion of tumors.[8] The electroencephalogram[12] usually reveals an abnormal record of nonspecific nature.

The white blood count and the temperature may be elevated, but these findings usually accompany an associated acute otitis or acute superior longitudinal sinus thrombosis.[12]

The superior sagittal venogram in some cases will reveal an obstruction in the posterior part of the sagittal sinus[11, 12] and the venous pressure[11, 12, 15] will be elevated beyond the normal 100-150 mm. of water.

It has been suggested that the Quackenstadt test should be used in diagnosing a lateral sinus thrombosis, but recent articles[15] have shown that because of the different sizes of the two sinuses, this is not a reliable test.

DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS

The names given to the entity indicate in part the differential diagnosis. Intracranial neoplasms, subdural hematomas, brain abscesses, optic neuritis, encephalitis, Guillain-Barré syndrome and numerous other neurological entities have to be considered.

To make a diagnosis, one must actually exclude all other possibilities. All clinical acumen and all available laboratory studies have to be employed before the diagnosis is made. One author[8] states that a normal pneumoencephalogram is absolutely necessary to rule out a brain tumor. In an occasional case initially diagnosed as cystic arachnoiditis or serous meningitis, a true tumor will eventually come to light. Davis and Haven[13] state that all patients suspected of having a pseudotumor cerebri must be closely followed as tumor suspects. This uncertainty is also indicated by Horrax's statement[2] that a few patients who were at first believed to have arachnoiditis subsequently proved to have brain tumor, but if the diagnosis of serous meningitis is faulty and a brain tumor actually is present, the original symptoms will always recur within a year, or the tumor will become obvious within that same length of time.

One diagnostic procedure that may lead to difficulty and should be undertaken only following ventriculograms is the lumbar puncture. Herniation of the cerebellum through the foramen magnum could occur if any significant quantity of fluid were withdrawn in the presence of a space-occupying lesion.

PATHOLOGY

Not a great deal has been written concerning pathology, either of the localized or of the generalized forms of the disease. Davis and Haven[13] have examined ten cases of localized cystic arachnoiditis and have found the three types of pathology previously referred to in this article: (1) inflammatory (one case); (2) fibrous (seven cases); (3) hyperplastic (two cases). Adhesions of the arachnoid to the pia have also been mentioned.[9] Davidoff and Dyke[5] noted cerebral edema in 13 of 15 cases in their series. Voris[10] mentions the thickened and opaque leptomeninges found at surgery, and at times, an underlying cerebral atrophy.

TREATMENT

In the early part of the century, subtemporal decompression was advised as a method for preventing optic atrophy and blindness when papilledema was severe and/or progressing. This is still the procedure of choice to prevent blindness.[1, 2, 5, 6, 12] Dandy[6] mentions one case in which blindness developed in spite of subtemporal decompression, apparently from a recurrence of the increased intracranial pressure. Dehydration[5] has been suggested, but no longer is recommended as a method of treatment for the condition.

In the cases of localized cystic arachnoiditis, it has been recommended that the adhesions be freed[9] so that the flow of cerebrospinal fluid can be uninhibited.

Repeated lumbar punctures to draw off the fluid have been recommended by some authors,[3, 7] but another has stated that they are unnecessary, once

subtemporal decompression has been accomplished.[6]

Mastoidectomy and the freeing of the lateral sinus of thrombosis[3] are recommended when otitis, with lateral sinus thrombosis, is assumed to have been the etiology. In those instances where an acute superior longitudinal sinus thrombosis is suspected and proved by sinus venography, there may be indication for anticoagulants, antibiotics and surgical removal.

Many cases are said to recover rapidly following ventriculography or surgery which relieves the increased pressure.[10]

PROGNOSIS

The prognosis is usually fair or good. Horrax[2] had 14 cases, out of a reported 33, who were well within two or three years following onset. An additional 14 were reported improved, and 5 subsequently died. All of the 15 patients reported by Davidoff[5] improved rapidly, and final disappearance of the edema occurred in six months to several years. Dandy[6] reports the condition as a self-limited illness, and says that spontaneous recovery is to be expected. He adds that four of his 22 cases recovered without treatment of any kind, and, therefore, he suspects that many mild cases are not diagnosed. Sahs and Hyndman[8] state that recovery occurs over a period of several months to a year, with no residual other than post-papilletic atrophy in some cases. Ray and Dunbar[11] state that the majority of patients recover spontaneously, a few die in the acute phase, and a few progress into a chronic phase, with papilledema, optic atrophy, severe headache and other neurological sequelae.

CASE NO. 1

K. S., a five-year-old, white boy, was first seen at Blank Memorial Hospital on August 27, 1953, with a four-week history of listlessness, lethargy and anorexia. One week prior to admission, he had developed a severe, persistent frontal headache and a temperature of 100° F. Two days prior to admission, unsteadiness in his gait had been noted. The immediate and more remote history were both negative, except for pharyngitis and laryngitis one week prior to admission. Physical findings revealed a boy who was markedly ill and lethargic. He sat in the tripod position. The neurologic examination revealed marked rigidity of the neck and back. There was inequality of the pupil size and sluggish response to light. There were two diopters of papilledema. The abdominal reflexes were absent, and there was hyperreflexia of the deep tendon reflexes. Bilateral, sustained clonus was present in the legs, and there were bilateral Babinskis. There was no ataxia and were no other cerebellar signs. The unsteadiness of gait was attributed to weakness.

The day after his admission, a lumbar puncture revealed a cerebrospinal fluid pressure of 280 mm.; a cell count of 75, primarily polymorphonuclear leucocytes; normal chemical studies for protein, sugar and chlorides; and a negative culture. Agglutination studies for Western and Eastern equine encephalitis, St. Louis strain encephalitis, lymphocytic choriomeningitis, brucellosis, paratyphoid, typhoid and Proteus OX 19 were negative. The mantoux was negative in all strengths. The heterophile agglutination was negative. Blood studies were normal, except for a white blood count of 18,000 and an erythrocyte sedimentation rate (Wintrobe method) of 55 mm. per hour. Skull X-rays were normal.

Sixteen days after admission, papilledema had increased and nystagmus had developed. The boy had lost sensation and motor control of his bladder. In addition, he was suffering from marked abdominal pain which appeared to be paresthesias of the abdominal wall. Antibiotics and sulfa drugs had been given him on a theoretical basis because of his increased white blood count and because of the remote possibility of his having a brain abscess. Because of the increase in retinal edema, a ventriculogram was done, but it was normal. Earlier, a repeat lumbar puncture had been performed, with approximately the same results as previously, except that only 14 cells were found.

Following the ventriculogram, a pneumoencephalogram was performed, but it revealed no pathology. The ventricles were described as small. A right subtemporal decompression was done to save the eyesight at that time. The dura was noted to be hyperemic and thick. A biopsy revealed dense fibrosis with some hemorrhage, but no evidence of inflammation or neoplasm.

Other studies revealed a negative serology, a normal chest X-ray and mild subluxation of the second cervical vertebrae in relation to the third on a cervical spine X-ray. The electroencephalogram was judged to be abnormal in general appearance, with no normal, organized rhythmic activity. The record, for the most part, was characterized by high amplitude and slow potentials, which were of greater incidence and amplitude over the left hemisphere. There was perhaps a greater degree of abnormality over the occipital cortex on the left, but there was not a definite focus. There were no spikes and no spike-and-wave forms. Hyperventilation could not be carried out. The interpretor called this a very abnormal record, with a lateralization to the left and a suggestion of somewhat greater abnormality in the left occipital cortex, and over the more anterior regions on the left. The findings were suggestive of some serious cerebral disease, with a lateralization to the left. Follow-up treatment in the hospital included X-ray treatment of 105 R's to each of the four aspects of the skull on four successive days. On October 8, when the patient was discharged, there was little improvement in the papilledema.

On October 13, 1953, the patient was readmitted because his condition had deteriorated while he was at home. He had regained control of his bladder, but he had become so markedly ataxic as to be unable to feed himself. His speech had become markedly slurred. Physical examination then revealed lateral nystagmus, deviation of the tongue to the right, hyper-reflexia, bilateral Babinskis, and bilateral, sustained ankle clonus. The abdominal reflexes were absent. A lumbar puncture revealed a pressure of 130 mm., with four cells and normal chemistry studies. A repeat pneumoencephalogram was normal. The spinal fluid was negative for Papanicolaou studies. The funduscopic examination revealed a mild atrophy. Six days after admission, cortisone was started empirically. The dosage was 300 mg. the first day, 200 mg. the second day, and 100 mg. daily, thereafter. Three days after the beginning of treatment, a gradual improvement was noted. The neurological signs became less marked. On November 10, 1953, twenty days after cortisone was started, the patient was discharged on daily maintenance doses of 50 mg. cortisone.

On November 24, 1953, the patient was markedly improved, without ataxia or nystagmus. There was no Babinski and no ankle clonus detectable, but a slight hyper-reflexia persisted. Cortisone was discontinued. On December 4, 1953, approximately five months after the onset of the symptoms and four months after his initial visit, the patient had recovered completely, except for some minimal weakness of the extremity muscles, probably due to disuse.

CASE NO. 2

G. C., a twelve-year-old, white boy, was admitted to Blank Memorial Hospital on September 28, 1953, with a one-week history of severe occipital and frontal headaches, low grade fever and projectile vomiting. The history was otherwise completely negative. The physical examination revealed moderate-to-marked nuchal and back rigidity and one diopter of papilledema, but was otherwise completely negative. Laboratory studies revealed normal blood counts, negative serology, negative agglutinations for Proteus OX 19, brucellosis, typhoid O, typhoid H, paratyphoid A and paratyphoid B. The heterophile agglutination and the serology were negative. The spinal fluid had a pressure of 225 mg., with a cell count of 33, primarily lymphocytes, and normal chemistries. Skull X-rays were normal.

The clinical course of this boy showed no improvement over a period of one month. A ventriculogram, on October 22, 1953, was normal except that small ventricles were demonstrated. Previously, encephalography had produced a record that was fairly regular in general appearance, with an even base line. There was a considerable amount of 11 c.p.s. activity, and there was some regular slow activity throughout. There were no focal disturbances. Hyperventilation induced a rather marked build-up, with a great deal of high-amplitude slow activity appearing paroxysmally. The record was interpreted as a borderline tracing, with some irregular, slow activity and an abnormal response to hyperventilation. The findings were minimal, but compatible with a grand mal disorder. Following the ventriculogram, the boy showed immediate improvement, and ten days later, on November 2, 1953, was discharged, without any subjective or objective findings. He was seen again on December 7, 1953, at which time there was no papilledema, nor were there any other physical findings. He was thought then to have recovered, approximately three months after the onset of the symptoms.

COMMENT

These two cases correspond with those ones reported in the literature as generalized serous meningitis, or pseudotumor cerebri. Both patients presented with symptoms of headache, vomiting, lethargy, papilledema, meningismus and low grade fever. Case 1 progressed through a period of two or three months, portraying most of the neurological symptoms that have been reported in the literature and some symptoms and findings which previously have not been reported. The most outstanding of the latter was the loss of bladder control for a two- or three-weeks period. The paresthesias of the abdominal wall and the deviation of the tongue are also interesting and unusual. Case 2 had only the most common symptoms and had none of the more inclusive ones presented by the first case.

Both patients had an increase in the cerebrospinal fluid pressure and normal chemistries. In both patients, there was a slight elevation in cell count, a phenomenon that has occasionally, but not invariably, been reported.

The electroencephalogram was abnormal in both, but was more characteristic of the expected nonspecific pattern in Case 1. Ventriculograms in both cases revealed normal, small, bilaterally equal ventricles, described as being typical. A pneumoencephalogram was done only in the first case and was normal. It was not done in the second case because of the marked clinical improvement that followed the ventriculogram. Sahs and Hyndman[8] state that without this procedure, a tumor cannot be ruled out. The patient is being kept under careful observation, and with any recurrence of symptoms, pneumoencephalography will be promptly carried out.

Sinus venography was not done, for the procedure is relatively new, and it was felt that other diagnostic possibilities should be exhausted first.

Case 2 recovered rapidly following ventriculography, which, as Voris[10] has said, often occurs. Case 1 responded much more slowly. In spite of

the normal pressure of the cerebrospinal fluid on the second admission, the symptoms had increased in severity.

The clinical response was remarkably rapid when improvement once began. Whether cortisone contributed to the response is debatable. The fact that improvement was noted three days after cortisone treatment was begun lends some credence to the idea that it has a therapeutic effect, but experience with the drug in this condition is limited, and should be used only in desperation, after all possible diagnostic and therapeutic studies had been exhausted.

SUMMARY

Two cases of serous meningitis are presented. The literature on the subject is extensively reviewed, consolidated and presented, as it relates to those two cases. Cortisone as a method of treatment is contemplated.

One year after the writing of this report, both of the patients remain well.

BIBLIOGRAPHY

1. Warrington, W. B.: Intracranial serous effusions of inflammatory origin. Meningitis or ependymitis serosa—meningismus—with a note on "pseudotumors" of the brain. Quart. J. Med., **7**:93-118, (Jan.) 1914.

2. Horrax, G.: Generalized cisternal arachnoiditis simulating cerebellar tumor; its surgical treatment and end-results. Arch. Surg., **9**:95-112, (July) 1924.

3. Symonds, C. P.: Otitic hydrocephalus. Brain, **54**:55-71, (Apr.) 1931.

4. Howell, C. M. H.: Arachnoiditis (President's address). Proc. Roy. Soc. Med., **30**:33-42, (Nov.) 1936.

5. Davidoff, L. M., and Dyke, C. G.: Presentation of a series of cases of serous meningitis. (Abst. New York Neurol. Soc. Proc.) J. Nerv. & Ment. Dis., **83**:700-705, (June) 1936.

6. Dandy, W. E.: Intracranial pressure without brain tumor. Ann. Surg., **106**:492-513, (Oct.) 1937.

7. McAlpine, D.: Toxic hydrocephalus. Brain, **60**:180-203, (June) 1937.

8. Sahs, A. L., and Hyndman, O. R.: Intracranial hypertension of unknown cause. Cerebral edema. Arch. Surg., **38**:428-442, (March) 1939.

9. Lillie, W. I.: Prechiasmal syndrome produced by chronic local arachnoiditis. Report of three cases. Arch. Ophthal., **24**:940-947, (Nov.) 1940.

10. Voris, H. C.: Serous meningitis. J. Neurosurg., **2**:498-506, (Nov.) 1945.

11. Ray, B. S., and Dunbar, H. S.: Thrombosis of the superior sagittal sinus as a cause for pseudotumor cerebri; methods of diagnosis and treatment. Trans. Amer. Neurol. A., **75**:12-17, 1950.

12. Ray, B. S., and Dunbar, H. S.: Thrombosis of the dural venous sinuses as a cause of "pseudotumor cerebri." Ann. Surg., **134**:376-386, (Sept.) 1951.

13. Davis, L., and Haven, H. A.: Clinico-pathological study of intracranial arachnoid membrane. J. Nerv. & Ment. Dis., **73**:129-143, (Feb.) 1931.

14. Kehrer, F. A.: Zur Frage des 'Pseudotumor cerebri.' Deutsche Ztschr. Nervenh., **160**:1-9, 1949 (Abst. in: Year Book of Neurology and Psychiatry, 1949, pp. 468-469, Chicago, The Year Book Publishers, Inc.).

15. Ray, B. S., personal communication, January, 1954.

16. Schaltenbrand, Georges: Chronische asceptische Meningitis. Nervenarzt, **20**:433-442, (Oct.) 1949.

17. Tobey, G. L., Jr., and Ayer, J. B.: Dynamic studies on the cerebrospinal fluid in the diagnosis of lateral sinus thrombosis. Arch. Otolaryngol., **2**:50-57, (July) 1925.

Agammaglobulinemia

REPORT OF A CASE AND REVIEW OF THE LITERATURE

ALLAN K. CHAPPELL, M.D.

PORTLAND, OREGON

O. B. WAS FIRST ADMITTED to Blank Memorial Hospital on November 20, 1943, at the age of six months because of a cellulitis of the right external ear. Subsequently, for a variety of infections, he was admitted 17 times to this hospital and 9 times at other hospitals, and had numerous out-patient treatments. Table 1 contains a chronological list of his illnesses. The infections were associated with an elevated white blood cell count and with a left shift. In general, they responded to antibiotics. A growth chart from Holt and McIntosh[1] (Fig. 1) shows his consistently retarded growth. He was always poorly nourished.

In 1950, at the age of seven years, he was taken to a clinic outside of Des Moines, where a diagnosis of bronchiectasis and septic arthritis was made. Bronchograms were normal except for a slight bronchiectasis in the right lower lobe, and he was put on continuous Aureomycin therapy for two years. His respiratory symptoms were less marked while he was on the drug, but when it was discontinued, a low-grade fever and cough became apparent.

He entered Blank Memorial Hospital on December 25, 1952, at the age of nine years, because of pain in the left hip and left great toe. His family history was entirely normal, as was his own, except for his many infections. X-ray of the hip was negative; X-ray of the chest showed bilateral pneumonia and bronchiectasis. Bilateral chronic mastoiditis and chronic pansinusitis were also evident in the films. Aspiration of the left hip joint yielded a negative culture, and by February 7, 1953, X-rays showed absorption of the left femoral head and obliteration of the joint space. Blood cultures were consistently negative. Candida albicans was isolated from sputum, stool and urine. Also, hemolitic Staphylococci and Pneumococci were isolated from the sputum. The patient's entire history was reviewed in consultation by Dr. Lee Forrest Hill, chief of pediatrics, who was impressed by the repeated infections and suggested the possibility of agammaglobulinemia. With this in mind, we carried out further studies.

Total protein was 6.4, albumin was 4.8, and globulin was 1.6, with an A/G ratio of 3.0. Elec-

---

This paper won second prize in the 1954 Pediatrics Contest. When he wrote it, and until recently, Dr. Chappell was a resident at the Raymond Blank Memorial Hospital, in Des Moines.

trophoretic analysis of the blood, done at the Veterans Administration Hospital in Des Moines, revealed no gamma globulin. A sample of blood was sent to Dr. Charles Janeway, in Boston, and his laboratory confirmed the lack of gamma globulin by electrophoretic analysis. But through the use of an immunochemical technic, he was able to find 35-40 mg. per cent of gamma globulin. (Normal value for gamma globulin is about 800 mg. per cent.) It was assumed that part of the small amount found was residual from the gamma globulin contained in the blood transfusions which the patient had received. Fig. 2 shows a normal electrophoretic pattern and that of a patient before and after treatment with gamma globulin. O. B. had received immunizations to diphtheria and had been successfully vaccinated for smallpox. His Schick and tuberculin tests were negative. Careful inquiry revealed no cases of repeated infections in his family.

Treatment consisted of a number of antibiotics, the choices having been made on the basis of culture and sensitivity tests. After the Candida albicans had been cultured, penicillin was discontinued and treatment with potassium iodide was begun. Gamma globulin was begun, in the recommended monthly dose of 0.1 Gm./kg., intramuscularly. A spica cast was put on the boy's left leg, and he began walking with crutches. His temperature became normal, the infections became less marked, and he was discharged on March 27, 1953.

TABLE I

O.B.'s ADMISSIONS AT BLANK HOSPITAL

1943	
November	Cellulitis
1944	
May	Otitis media
	Pneumonia
	Pleural effusion
December	Otitis media
	Cellulitis
1945	
April	Otitis media
May	Otitis media
	Cellulitis
	Lymphangitis
November	Pyelitis
December	Impetigo
	Lymphangitis
1946	
February	Otitis media
March	Otitis media
November	Impetigo
	Otitis media
	Pneumonia
1947	
March	Meningitis (H. influenza)
1949	
April	Otitis media
	Arthritis, septic, left knee
1952	
December	Otitis media
	Bronchiectasis
	Pneumonia
	Arthritis, septic, left hip
	Moniliasis
	Chronic mastoiditis
	Chronic pansinusitis
1953	
April	(as above)
June	(as above)

The infections listed above are those for which O.B. was hospitalized at Blank Memorial Hospital, Des Moines, from age 6 months to age 10 years. They do not include the ailments for which he had nine admissions at other hospitals or the minor ones for which he was treated at the outpatient clinic.

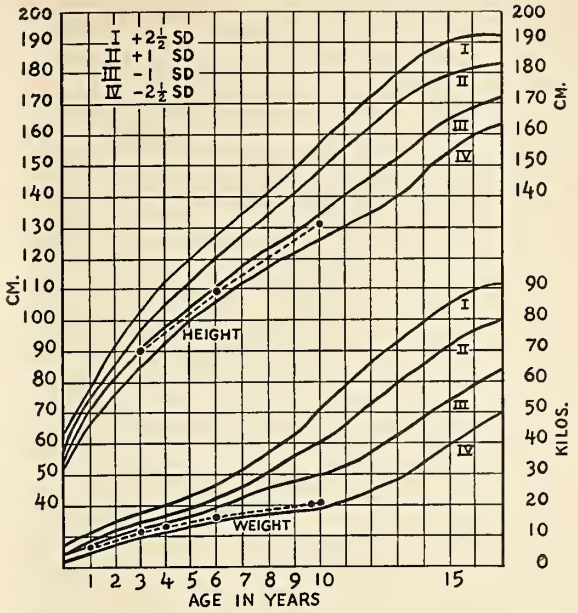


Figure 1.[1] The patient's retarded growth is particularly noticeable on the weight curve, where he is shown to have been consistently 2½ standard deviations below average.

On April 9, 1953, he was again admitted with the complaint of hemoptysis of two days' duration. There was impaired resonance and decreased breath sounds, with occasional rales in the lower left chest. X-ray showed pneumonia and bronchiectasis bilaterally, more marked on the left. A bronchogram showed bronchiectasis of the left lower, the lingula of the left upper, the right middle and the right lower lobes of the lungs. There was also some involvement of the anterior division of the right upper and left upper lobes. Bronchoscopy resulted in the removal of a large amount of thick secretions from both the right and left lower bronchi. The hemoptysis cleared, and the patient's general condition improved after symptomatic therapy which included postural drainage, blood transfusion, potassium iodide and antibiotics. He was discharged on June 15, 1953.

O. B.'s final admission was on June 22, 1953, because of recurrence of hemoptysis. Examination on admission revealed purulent drainage from the right ear. Rales were audible at the bases of both lungs, more marked on the left, and, also, there was a decrease in breath sounds on the left. He was bronchoscoped, and a great deal of pus was removed, more from the left than from the right. No bleeding point was seen.

On June 29, a left lower lobectomy and lingulectomy were performed. In spite of postural drainage, repeated bronchoscopy and the use of antibiotics, he had developed atelectasis of the left upper lobe. Because difficulty was encountered in maintaining an adequate airway, a tracheotomy was done on July 15, and he was placed in an iron

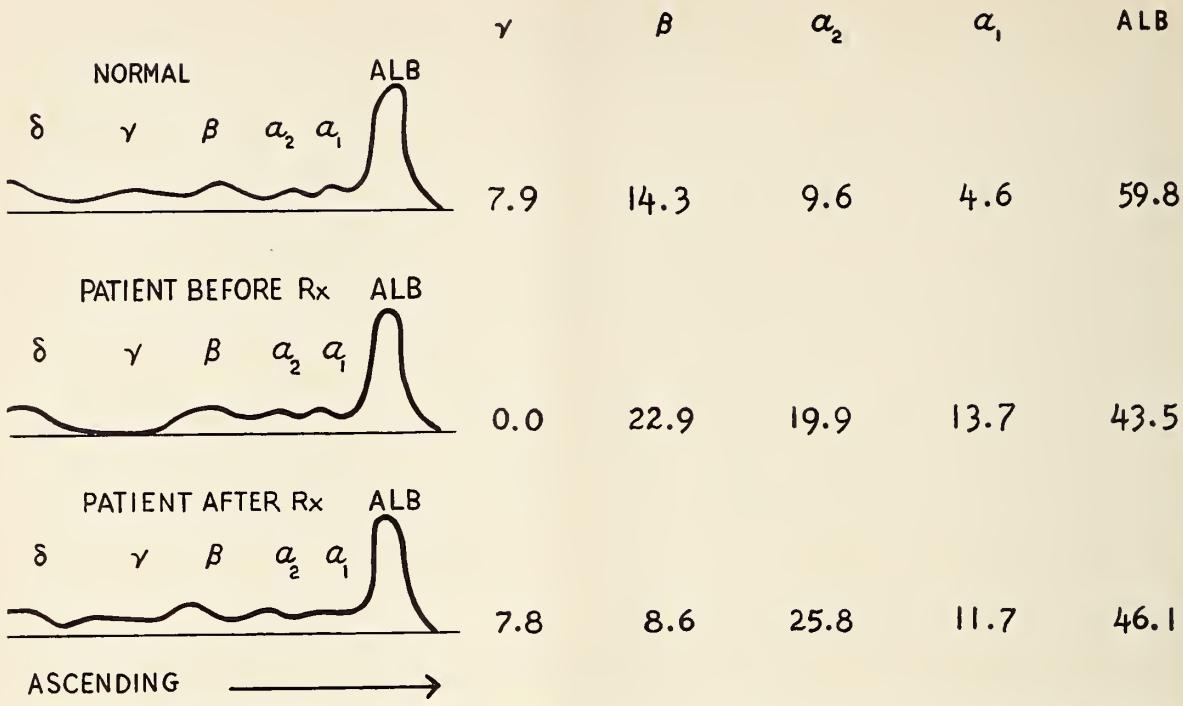


Figure 2. A normal electrophoretic pattern is compared with that of a patient before and after gamma globulin was given to him. The values given are percentages of the total serum protein. These curves and the accompanying statistics first appeared with Dr. O. C. Bruton's article "Agammaglobulinemia," in PEDIATRICS, 9:725, (June) 1952. Grateful acknowledgment is due to that author and journal.

lung. He then developed marked and progressive respiratory acidosis, for which he was unable to compensate. On July 16, his blood chloride was 601 mg. per cent (103 mEq./L.) and his CO_2 was 90 volumes per cent (41 mEq./L.). On the following day, his blood pH was 7.3, and on July 18, his blood pH was 7.21, and his CO_2 was 118 volumes per cent (53 mEq./L.). He died on July 19, 1953.

At autopsy, there was marked bronchiectasis bilaterally, with consolidation and atelectasis of the left upper lobe, and subtotal atelectasis and patchy consolidation of the entire right lung. It is of interest that there was no significant adenopathy, for one would expect it to be marked in a patient with so many infections. The spleen weighed 100 grams, and microscopic examination showed extremely small and sparse follicles. The red pulp was extremely congested and showed very few pulp cells.

DISCUSSION

The first case of agammaglobulinemia was reported in June, 1952, by Bruton,[2, 5] of the Walter Reed Army Medical Center. His case was an 8½-year-old boy who had been seen for 19 episodes of clinical sepsis during a four-year period. Blood cultures were positive in 10 different episodes for 8 different types of Pneumococci. In general, he responded to antibiotics, and he was well nourished and of normal growth. He was found to develop no antibody titer after administration of autogenous vaccine of Pneumococci. His Schick test was positive at eight years, although he had had a diphtheria toxoid series and boosters. Boosters failed to change the Schick. Administration of typhoid vaccine resulted in no antibodies. Electrophoretic analysis showed no gamma globulin. Because he had had no significant infections prior to age 4½ years, it seemed possible that his lack of gamma globulin was an acquired defect. However, it was thought more likely that the defect was congenital, on the pattern of hemophilia and afibrinogenemia. The patient was given monthly 20 cc. injections of immune serum globulin containing 3.2 Gm. of gamma globulin, and when the report was written he had had no infections for 30 months.

In May, 1952, with Bruton, Janeway and his associates[3] in Boston presented to the Society for Pediatric Research three patients with a syndrome characterized by (1) a history of recurrent infections, (2) evidence of deficient antibody production, and (3) relatively normal total serum proteins. Since then, Janeway *et al.*[4] report that they have collected a group of nine cases, six from their own clinic and three from other clinics. Our patient, O. B., is one of the latter.

Janeway[4] observes that the onset of multiple infections very early in life supports the theory that agammaglobulinemia is in most instances congenital. The possibility of sex-linked inheritance is

suggested by the fact that all cases thus far have been in males and by the fact that a male sibling of one of Janeway's patients and the maternal uncle of another of them died in childhood of multiple septic infections. However, sera of siblings, parents and one set of grandparents showed normal amounts of gamma globulin. Immunological studies of sections from one autopsied case, in which the lymphoid tissue was strikingly diminished, and from biopsy material in another showed a great diminution of gamma globulin in its usual distribution in the connective tissues. The Janeway group found that children of this sort respond normally to the common virus infections of childhood and to inoculation with vaccinia virus. But artificial immunization fails to produce detectable circulatory antibodies in these patients, and an absence of isohemagglutinins in the blood in patients belonging to blood groups O, A, or B may be used as a simple laboratory test on which to base a strong suspicion of this condition. Administration of gamma globulin monthly has given the patients striking protection. The long half-life of such passively transferred antibodies further confirms the hypothesis that the basic difficulty lies in a deficient synthesis, rather than in a greatly accelerated rate of destruction of gamma globulins. Fig. 4 shows the amount of gamma globulin measurable in the serum by electrophoretic analysis after 20 cc. of gamma globulin had been administered to Bruton's first case. It has been estimated that a total gamma globulin level of 100-150 mg. per cent prevents infection.

The criteria for diagnosis which Janeway gave me in a personal communication, February 3, 1953, are as follows: (1) history of multiple serious septic infections, (2) absence of isohemagglutinins or other naturally occurring antibodies which would be expected in the blood, including antibodies to those infections against which the patient has been immunized, (3) absence of gamma globulin by electrophoretic analysis in the face of an otherwise relatively normal serum protein distribution, (4) absence of gamma globulin, or at least a very low level, preferably below 100 mg. per cent (later modified to 30 mg. per cent), as determined by a relatively specific method such as the immunochemical.

Other cases have been reported where low gamma globulin was found in association with various diseases. Stern[6] reports two cases of hypoproteinemia who had "almost complete absence of gamma globulin and were singularly free from infection." Schick[7] reported a similar congenital case without nephrosis in which the total protein was low, the gamma globulin was low, and edema was present. His case had negative Schick and Dick tests, thereby confirming the presence of antibodies in the serum. However, attempts to stimulate antibody formation by injection of diphtheria toxoid, typhoid vaccine and pertussis vaccines were completely unsuccessful. The defect was considered to be a congenital deficiency in the liver, bone marrow or reticulo-endothelial system which accounted for the inability to synthesize plasma proteins properly.

Schick explained the immunity on the basis of differentiating humoral immunity, represented by the presence of antibodies in the gamma globulin, and cellular immunity based on the patient's ability to produce antibodies quickly in the absence of gamma globulin. However, it is possible that in these cases the level of gamma globulin (100-150 mg. per cent) was sufficient to prevent infections, but insufficient to be measurable by the relatively crude electrophoretic method. Krebs[8] reported a case in which there was a depression of gamma globulin in hypoproteinemia due to malnutrition. The gamma globulin increased from 150 mg. per cent to 680 mg. per cent following a high protein intake. A course of immunization with typhoid antigen failed to cause an antibody response. Bieler and his associates[9] found that the gamma portion of the globulin seemed most refractory to inanition diminution, whereas Krebs found the most striking changes in the gamma fraction. Wyngaarden[10] reported a case of transient edema, depression of albumin and gamma globulin, and eosinophilia. No etiology was apparent, and it was felt that the changes were due to some obscure disturbance of the albumin and gamma globulin metabolism.

In patients with lipoid nephrosis, there is lowered gamma globulin, as determined by electrophoretic analysis, and they are well known for their susceptibility to pneumococcic infections. Longsworth and MacInnes[11] confirmed this observation and speculated that the low level may be due, at least in part, to loss of protein in the urine. Keidan[12] reported a case of fatal generalized vaccinia in an infant. The child was vaccinated at eight weeks of age and died seven weeks later. Electrophoretic analysis showed no gamma globulin, and there was a complete absence of detectable neutralizing antibody for variola virus.

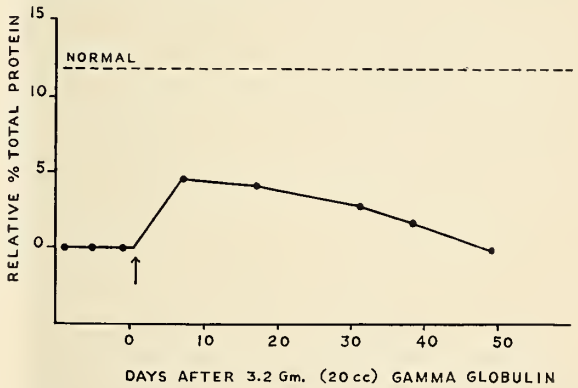


Figure 3. This chart shows the amounts of gamma globulin that were measurable in a patient of Dr. Bruton's, after the administration of 20 cc. of gamma globulin. Thanks, again, are due to Dr. Bruton and to PEDIATRICS.

A low gamma globulin level is found in Cushing's disease, along with a low lymphocyte count.[13] In accord with Dougherty's concept[14] that adrenal cortical secretion causes release of gamma globulin from lymphoid tissue, it is supposed that in Cushing's syndrome the stores are exhausted as a result of their constant exposure to hypersecretion. It has been found by DuPan and Moore[15] that in fetal life gamma globulin is low, but that it gradually rises to a maximum at birth, when it exceeds the maternal values. A steep drop occurs during the infant's first two or three months of life, and then there is a gradual rise, until a nearly adult level is reached at two years.

Gamma globulin levels are found to be elevated in active tuberculosis, rheumatic fever, disseminated lupus erythematosus, cardiac failure, sarcoid, lymphogranuloma, cirrhosis, rheumatoid arthritis, certain chronic infections and multiple myeloma.[16, 17] Gamma globulin also rises in response to immunization, the rise being quantitatively equal to the antibody rise.[6] This fact suggests that gamma globulin and antibody are either identical or at least closely associated. Boyd and Bernard[18] believe that all gamma globulin may be antibody of one sort or another, and they present some evidence in support of their conception. However, Kabat[17] has reviewed their work and feels that there is little factual evidence to support the suggestion. He points out that gamma globulin is a considerable portion of the total serum protein (about 0.8 Gm. per cent), whereas the amount of circulating antibody in terms of milligrams of protein in non-immune individuals is extremely small. It has also been found that antibody induced by administration of anti-pneumococcal horse serum becomes apparent on electrophoretic analysis as a new component of mobility intermediate between the beta and gamma globulins. Cohn, Deutsch and Wetter[19] have demonstrated four gamma globulin fractions which differ slightly in average electrophoretic mobility at pH 8.6. Each consists of several antigens, and various antibodies are also predominantly found in one of the four fractions. The fractions have been called gamma-1, gamma-2, II-1, 2, and II-3. Isohemagglutinins are found in the gamma-1, and diphtheria antitoxin is found in the gamma-2 fraction.

Methods of determination of gamma globulin include (1) the electrophoretic method; (2) chemical procedures—usually based on salt or organic solvent precipitation; and (3) immunochemical methods, which are the most precise. Saifer and Zymaris[20] have reviewed these procedures and present a new one which compares very well with electrophoretic analysis and is much simpler to do. It consists of flocculating the gamma globulin out of solution quantitatively, and then measuring the protein content of the complex by ninhydrin reaction.

Our patient O. B. fulfills most of the criteria for agammaglobulinemia, but he differs in several respects from the other reported cases. Most of the cases reported by Janeway have been well nourished individuals and have responded very well to the administration of gamma globulin. O. B. was very poorly nourished, he had irreversible bronchiectasis and other chronic infections, and he therefore did not respond more than temporarily to the administration of gamma globulin. Also, in contradistinction to the other cases, he had a negative Schick test. It would appear that our case represents agammaglobulinemia, but the fact that he was able to develop detectable antibodies after immunization to diphtheria indicates the presence in him of some humoral antibodies, which implies that he had some gamma globulin too. However, as stated above, the diphtheria antitoxin is found predominantly in the gamma-2 fraction, which may be present in a quantity sufficient to carry enough antibodies for the production of a positive Schick test, but not enough to be demonstrable on electrophoretic analysis or to give significant values on immunochemical determination. Although these suggestions that I have made are sheer speculation, perhaps further experimental studies will support them.

It may be noted that in several cases of hypogammaglobulinemia previously described, there was no response to stimulation with various vaccines. Thus, there may be a critical level of gamma globulin, quite apart from the so-called "preventive against infection" level of 100-150 mg. per cent, at which antibody formation will occur. An alternative supposition, which would be consistent with the other cases of hypogammaglobulinemia and with O. B., is that a change occurs in the gamma globulin so that no further antibody response is possible, but the previously formed antibody is still manifest.

SUMMARY AND CONCLUSIONS

A case of agammaglobulinemia is presented, and the literature is reviewed. Methods for determining gamma globulin are briefly considered. The relationship between gamma globulin and antibody formation as they are concerned with immunity is discussed.

It is suggested that a determination of isohemagglutinins be performed in any case where agammaglobulinemia is suspected. If they are absent in a patient with blood type A, B or O, then a presumptive diagnosis can be made. Conclusive evidence rests on immunochemical determinations in which the value of gamma globulin is 30 mg. per cent or less.

In conclusion, agammaglobulinemia is a disease which occurs at an early age in males and is characterized by severe, recurrent, septic infections. It is possibly transmitted by females and most likely represents a congenital defect of protein synthesis. The gamma globulin is absent,

although the total protein and A/G ratio are normal. The disease responds to administration of gamma globulin at monthly intervals.

BIBLIOGRAPHY

1. Holt, L. E., and McIntosh, R.: Holt Pediatrics, Twelfth Edition. New York, Appleton-Century-Crofts, 1953.
2. Bruton, O. C.: Agammaglobulinemia. Pediatrics, **9**:722-727, (June) 1952.
3. Bruton, O. C., Apt, L., Gitlin, D., and Janeway, C. A.: (On agammaglobulinemia) cited in Transactions of the Association of American Physicians, **66**:200, 1953.
4. Janeway, C. A., Apt, L., and Gitlin, D.: Agammaglobulinemia. Trans. Ass. Am. Physicians, **66**:200-201, 1953.
5. Bruton, O. C.: Agammaglobulinemia. M. Ann. Dist. of Columbia, **22**:648-650, (Dec.) 1953.
6. Stern, K. G., and Reiner, M.: Electrophoresis in medicine. Yale J. Biol. & Med., **19**:67-99, (Oct.) 1946.
7. Schick, B., and Greenbaum, J. W.: Edema with hypoproteinemia due to congenital defect in protein formation. Case report. J. Pediat., **27**:241-245, (Sept.) 1945.
8. Krebs, E. G.: Depression of gamma globulin in hypoproteinemia due to malnutrition. J. Lab. & Clin. Med., **31**:85-89, (Jan.) 1946.
9. Bieler, M. M., Ecker, E. E., and Spies, T. D.: Serum proteins in hypoproteinemia due to nutritional deficiency. J. Lab. & Clin. Med., **32**:130-138, (Feb.) 1947.
10. Wyngaarden, J. B., Crawford, J. D., Chamberlin, H. R., and Lever, W. F.: Idiopathic hypoproteinemia. Report of a case of transient edema, depression of plasma albumin and gamma globulin and eosinophilia. Pediatrics, **9**:729-734, (June) 1952.
11. Longsworth, L. G., and MacInnes, D. A.: Electrophoretic study of nephrotic sera and urine. J. Exper. Med., **71**:77-82, (Jan.) 1940.
12. Keidan, S. E., McCarthy, K., and Haworth, J. C.: Fatal generalized vaccinia with failure of antibody production and absence of serum gamma globulin. Arch. Dis. Childhood, **28**:110-116, (Apr.) 1953.
13. Lewis, L. A., and McCullagh, E. P.: Plasma protein pattern (Tiselius electrophoretic technique) in Cushing's syndrome. J. Clin. Endocrinol., **7**:559-565, (Aug.) 1947.
14. Dougherty, T. F., Chase, J. H., and White, A.: Pituitary-adrenal cortical control of antibody release from lymphocytes. Explanation of anamnestic response. Proc. Soc. Exper. Biol. & Med., **58**:135-140, (Feb.) 1945.
15. DuPan, R. M., and Moore, D., in Annals Paediatrica (Basel), **171**:290, 1948.
16. Bongiovanni, A. M., and Wolman, I. J.: Plasma protein fractionation in pediatrics; review of its present status. Am. J. Med. Sc., **218**:700-714, (Dec.) 1949.
17. Kabat, E. A.: Immunochemistry of the proteins. J. Immunol., **47**:513-587, (Dec.) 1943.
18. Boyd, W. C., and Bernard, H.: Quantitative changes in antibodies and globulin fractions in sera of rabbits injected with several antigens. J. Immunol., **33**:111-122, (Aug.) 1937.
19. Cohn, M., Deutsch, H. F., and Wetter, L. R.: Biophysical studies of blood plasma proteins; analysis of immunological heterogeneity of human gamma globulin fractions. J. Immunol., **64**:381-395, (May) 1950.
20. Saifer, A., and Zymaris, M. C.: Photometric microdeterminations of human gamma globulin. J. Clin. Invest., **31**:1-11, (Jan.) 1952.

Mortality Study of Young Diabetic Patients

DONALD W. ORTMEYER, M.D.
DES MOINES
AND
ROBERT L. JACKSON, M.D.
COLUMBIA, MISSOURI

At the Pediatrics Department of the State University of Iowa, we collected objective information on which to classify a large group of juvenile diabetic patients according to the degrees to which the disease was under control in each of them.[1] And, in addition, we gathered data on which to evaluate their social and economic backgrounds. Because it was our clinical impression that children from poorly integrated family units have particular difficulty in maintaining a high level of control of their diabetes, we analyzed and correlated our information in an effort to point up those relationships.

HISTORY

Since the discovery of insulin in 1922, there has been a sharp decrease in mortality from diabetes mellitus in all age groups under 45 years.[2] But though the incidence of death from diabetic coma among juvenile patients has decreased, that from cardiovascular renal disease has increased sharply during that same period.[3, 4] The average duration of diabetes mellitus in patients dying of diabetic coma in the period prior to 1950 was 10 years, and in patients dying of cardiac disease it was 22 years.[3] But kidney disease has been reported as the most important cause of death in juvenile diabetic patients in the past decade,[4, 5] and White and Waskow state that since 1940, every diabetic child seen in their clinic who has survived 15 or more years of diabetes and has then come to autopsy has shown diabetic glomerulosclerosis.[4] Those patients who have maintained a relatively poor level of control develop degenerative changes earlier than those who have been well controlled.[1, 6]

The age-adjusted death rate from diabetes mellitus for patients of all ages has remained stationary or has fallen slightly during the past decade, but morbidity is increasing.[7, 8] In a series of 49,922 postmortem examinations,[9] two per cent

The project of which this is the final report was financed in part by a research grant (No. A-65 (C2)) from the National Institutes of Health, U. S. Public Health Service. Dr. Ortmeyer, now an intern at Broadlawns Polk County Hospital, worked on it as an undergraduate medical student, and Dr. Jackson, now head of the Department of Pediatrics at Missouri's new four-year medical school, directed it as a member of the staff in pediatrics at S.U.I.

of the males and five per cent of the females over 40 years of age had clinical diabetes mellitus at the time of death.

Mortality studies on diabetic patients of all ages definitely show a high incidence of deaths due to cardiovascular renal disease.[9, 10, 11] Heart disease of the coronary type is listed by some authors as the most important cause of death in patients with diabetes.[12, 13, 14] Autopsy reports indicate that the incidence of significant coronary atherosclerosis is markedly higher in diabetic patients than in non-diabetic ones.[12, 15] Autopsies performed on a series of 55 patients who had had diabetes more than 20 years showed only minimal vascular lesions in 17, and one-third of a series of patients who had had diabetes more than 15 years did not die of vascular diseases.[9] The author of that report had not correlated his findings with the levels of control maintained by the patients prior to their deaths.

METHOD OF STUDY

In the Department of Pediatrics at the State University of Iowa during the 32 years 1920 through 1952, the juvenile diabetic patients numbered 486. Of those patients, 371 are still being actively observed in the Diabetic Clinic, and 175 have had the disease more than 10 years. Forty patients have died, and 75 others, though they were seen in the Clinic as children, were lost for follow-up as adults, and remain untraced. The percentage of deaths (9.7) in the 411 observed patients corresponds closely with that reported in the literature. In this paper, we are presenting causes of death and autopsy findings on our 40 deaths in relation to the clinical course of each patient's disease.

Table 1 presents data obtained from our study of those 40 cases. In 12 instances, we were unable to obtain information as to the date or cause of death, or had insufficient information to determine the exact cause of death. In the 28 other cases, the cause of death was obtained from records at this hospital, from the physician attending at the time of death, or from relatives of the deceased patient. Autopsies were performed on seven patients, six of them at SUI Hospitals.

The level of control in each instance was evaluated by methods described in previous publications from this Clinic.[1] "Good control" consists of very occasional glycosuria and maintenance of blood sugars within a normal range. "Fair control" consists of minimal glycosuria in 50 to 60 per cent of

TABLE 1

ANALYSIS OF 40 DECEASED JUVENILE DIABETIC PATIENTS

No.	Sex	Birth Date	Age Onset yr.-mo.	Observed in Outclinic yrs.	Status		I.Q.	Overall Control	Episodes		Control 6 Months Before Death	Duration Disease at Death yr.-mo.	Cause* of Death	Autopsy
					Soc.	Econ.			Hypoglycemia	Acidosis				
1	F	1927	13-0	2	Poor	Poor	118	Fair-Poor	occ. mild	1	Poor	2-3	5	No
2	F	1923	12-6	5	Poor	Poor	105	Fair	freq. mod.	0	—	12-1	8	No
3	F	1924	7-4	0	Poor	Fair	133	Fair	freq. mod.	0	Fair	9-4	8	No
4	M	1922	8-3	7	Fair	Poor	—	Fair	freq. sev.	5	—	14-6	8	Yes
5	F	1922	10-5	3	Poor	Poor	88	Fair-Poor	freq. sev.	3	—	9-4	5	No
6	F	1925	8-6	7	Poor	Fair	105	Good-Fair	freq. mod.	3	—	12-1	8	No
7	F	1919	6-8	3	Poor	Fair	90	Fair-Poor	occ. mild	4	—	18-0	7	No
8	M	1926	8-11	2	Good	Good	—	Good-Fair	occ. mild	0	Fair	2-0	2	No
9	M	1920	7-4	10	Fair	Poor	94	Fair	freq. mild	2	Fair	10-5	5	No
10	M	1921	9-3	1	Fair	Poor	93	Poor	occ. mild	0	Poor	21-4	4	No
11	F	1935	5-1	0	Poor	Poor	—	Poor	freq. mod.	0	—	2-8	5	No
12	F	1918	10-0	3	Fair	Poor	102	Fair	occ. sev.	2	Fair	7-6	5	Yes
13	F	1924	11-10	0	Fair	Poor	118	Fair	none	2	Poor	3-3	1	No
14	F	1925	4-6	5	Poor	Poor	110	Fair	freq. mod.	1	Fair	10-0	5	No
15	F	1933	5-1	0	—	Poor	—	Poor	none	1	Poor	0-1	1	No
16	M	1942	4-5	1	Good	Fair	115	Fair	occ. mild	0	—	2-4	8	No
17	M	1926	12-0	3	Poor	Poor	57	Poor	freq. sev.	NK	Poor	11-10	1	No
18	M	1939	0-6	0	—	Fair	—	Poor	none	0	Poor	0-7	5	Yes
19	M	1926	11-0	5	Poor	—	67	Poor	freq. mild	0	—	—	8	—
20	M	1925	3-4	4	Poor	Poor	71	Fair	none	1	—	—	8	—
21	M	1920	14-2	4	Fair	—	83	Poor	none	1	—	—	8	—
22	M	1923	11-11	2	Poor	Poor	80	Fair-Poor	occ. mild	NK	Poor	11-0	5	No
23	F	1925	13-4	3	Poor	Fair	105	Poor	freq. mod.	1	—	—	8	—
24	F	1914	9-1	3	Poor	Poor	70	Fair-Poor	occ. mild	NK	—	14-10	1	No
25	M	1927	11-8	2	Poor	Poor	88	Poor	occ. mild	0	—	—	8	—
26	M	1937	3-5	1	—	Poor	—	Fair	occ. sev.	2	Fair	1-5	5	No
27	F	1919	2-6	3	Fair	Fair	108	Poor	occ. mild	2	Poor	22-8	4	Yes
28	F	1916	11-0	1	Poor	Poor	118	Poor	occ. mild	5	—	—	8	—
29	M	1928	12-0	2	Poor	Poor	103	Poor	freq. mild	0	Fair-Poor	8-5	7	Yes
30	F	1919	11-5	8	Poor	Poor	113	Poor	freq. mild	6	Poor	21-6	4	No
31	M	1924	13-8	1	Fair	Fair	—	Fair-Poor	occ. mild	0	Fair-Poor	13-9	3	No
32	F	1913	10-6	7	—	—	—	Poor	occ. mild	5	Poor	14-3	6	No
33	M	1912	10-0	5	Poor	—	102	Fair-Poor	none	0	—	—	8	—
34	M	1924	1-8	5	Poor	Fair	102	Fair	occ. mild	0	Fair	5-4	5	Yes
35	F	1932	5-6	2	Good	Poor	108	Poor	freq. mod.	NK	Poor	9-0	1	No
36	F	1915	11-5	5	Poor	Poor	90	Poor	occ. mild	1	Poor	21-7	6	No
37	M	1936	6-6	0	—	Poor	45	Poor	occ. sev.	1	Poor	4-1	1	No
38	M	1944	4-10	1	—	Poor	115	Poor	occ. mild	1	Poor	1-7	1	No
39	F	1950	0-4	2	Fair	Fair	—	Good-Fair	occ. sev.	0	Good-Fair	2-1	5	Yes
40	F	1943	6-8	1	—	—	—	Fair	none	1	—	1-7	1	No

*Cause of Death
1) Diabetic acidosis
2) Hypoglycemia
3) Vascular accident
4) Kimmelstiel-Wilson disease
5) Infection
6) Tuberculosis
7) Accidental
8) Not known (NK)

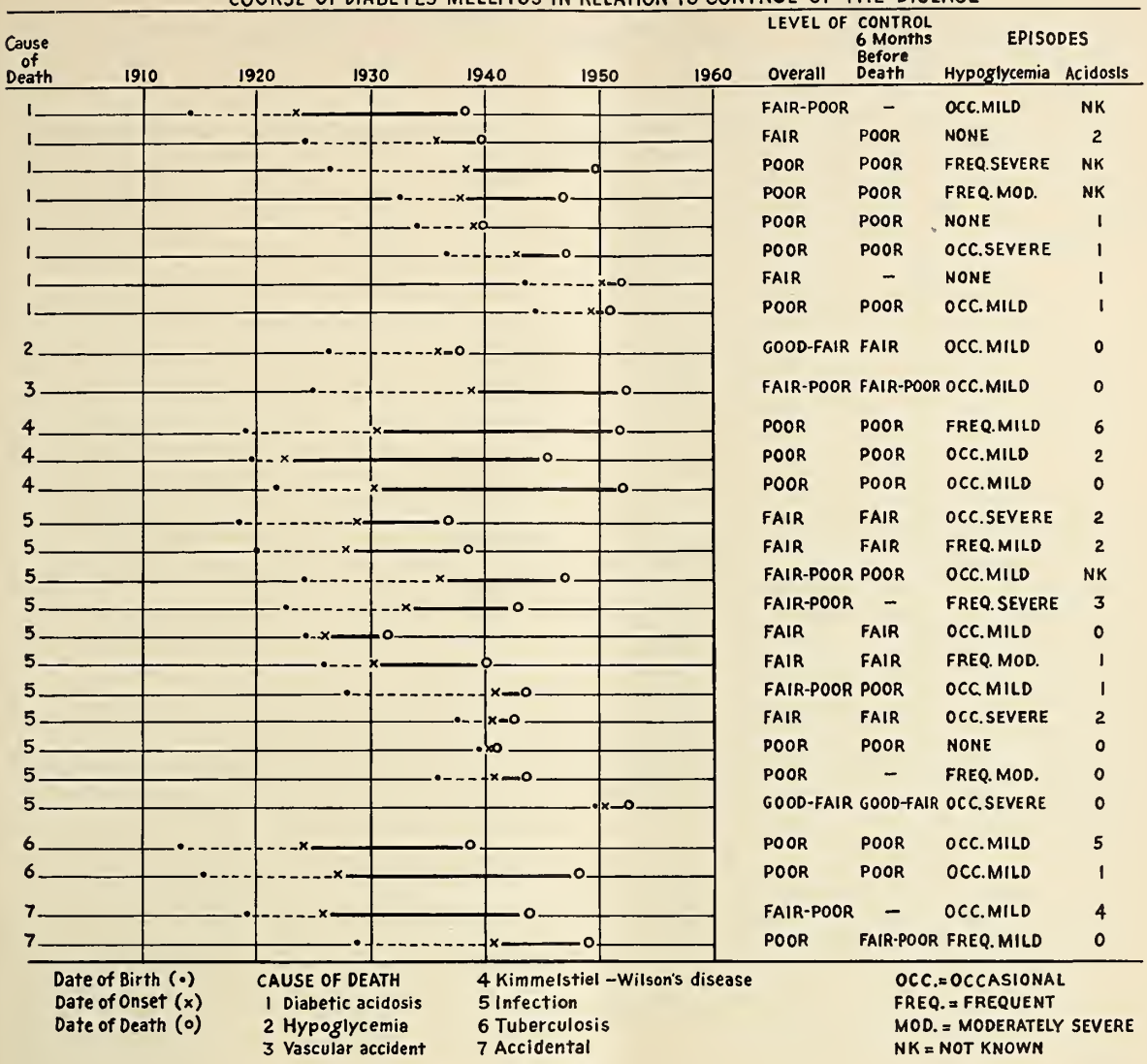


Figure 1

urine samples, and a normal or slightly elevated blood sugar range. "Poor control" consists of continual gross glycosuria and elevated blood sugar levels. The level of control was evaluated primarily from detailed records kept throughout the years during which the patient was seen regularly in our Clinic. In 24 cases, we had sufficient information to determine the clinical control of the disease during the six months prior to death.

In determining the social status of the patient, we took several factors into consideration. These included home and community environment as it relates to stability of the home, emotional adjustment of the patient and his family to the disease, and the influence of other diabetics in the immediate family. The economic status was called "poor" if the family was unable to provide adequate food, clothing, shelter and/or insulin for the patient; "fair" if it was able to provide only those basic needs; and "good" if it was able to provide appreciably more than those necessities. Both the social and the economic status were determined primarily from information obtained while the patients were being regularly seen in our outpatient clinic, and in some cases the data were somewhat out of date at the time of the patient's death.

Insulin reactions were regarded as "frequent" if they occurred one or more times per month, and "occasional" if they occurred less often. They were considered "mild" if they were recognized by the patient and were easily corrected; "moderately severe" if they produced emotional instability; and "severe" if unconsciousness and/or convulsions resulted from them. The "number of times in diabetic acidosis" represents the number of hospital admissions the patient had for that condi-

TABLE 2

MEAN AND PERCENTILE VALUES OF AGE AT DEATH AND DURATION OF DIABETES IN RELATION TO CAUSE OF DEATH

Cause of Death	No. of Cases	Age at Death (Years)				Duration of Diabetes (Years)			
		Mean	25th Percentile	50th Percentile	75th Percentile	Mean	25th Percentile	50th Percentile	75th Percentile
All Cases	33	17.0	8.0	18.0	24.0	9.17	2.25	9.33	12.08
Diabetic Acidosis	8	13.4	2.0	10.0	15.0	5.78	1.58	3.25	9.00
Infection	11	12.0	5.0	15.0	18.0	5.69	2.08	5.33	10.00
Kimmelstiel-Wilson's disease ..	3	29.7	Range 25.0 to 33.0			21.83	Range 21.33 to 22.67		

tion, including the episodes associated with the onset of the disease and the infections which occurred during its course. We had insufficient data for accurate determinations of the frequency of ketosis.

FINDINGS

Figure 1 shows 28 cases grouped by cause of death, and indicates the level of control and frequency of episodes of hypoglycemia and acidosis. Causes of death, ranked in order of importance, are: infection 11 (39.3 per cent); diabetic acidosis 8 (28.6 per cent); kidney disease of the Kimmelstiel-Wilson type 3 (10.7 per cent); tuberculosis and accidental death each 2 (7.1 per cent); and hypoglycemia and vascular accident each 1 (3.6 per cent). Table 2 presents the mean and the 25th, 50th and 75th percentiles as determined, from age at death and duration of diabetes, for all cases and for those dying of similar causes.

TABLE 3

NUMBER OF CASES AND DURATION OF DIABETES RELATED TO CAUSE OF DEATH

Duration of Diabetes yrs.	Diabetic Acidosis	Hypoglycemia	Vascular Accident	Kimmelstiel-Wilson's Disease	Infection	Tuberculosis	Accidental
0-5	5	1	0	0	5	0	0
5-10	1	0	0	0	5	0	1
10-15	2	0	1	0	1	1	0
15-20	0	0	0	0	0	0	1
20-25	0	0	0	3	0	1	0

Table 3 shows the duration of the disease as it relates to the cause of death in our series of cases. Diabetic acidosis and infection were the cause of death in 90.9 per cent of those cases in which death occurred during the first five years of the patient's diabetes. Of the patients who had had their disease 5 to 10 years at the time of death, 71.4 per cent died of infection. In the 10-15 year group, a male 27 years of age died of a vascular accident which was clinically diagnosed as coronary thrombosis. However, no autopsy was obtained. In the 20-25 year group, three patients died of Kimmelstiel-Wilson's disease with intercapillary glomerulosclerotic lesions in the kidneys.

Nine of the 11 deaths due to infection occurred prior to the general use of antibiotics, and the majority of those deaths were caused by pneumonia. Case No. 1, who died of pneumonia, was in fair-to-poor control during two years of clinic visits, and in poor control during the six months immediately preceding her death. The patient had occasional mild insulin reactions and was in diabetic acidosis once during the course of her disease. Her parents had been divorced, and she lived with various relatives during her childhood. The economic status of this patient was also poor.

Case No. 5 died of pneumonia and was in fair-to-poor control during her three years of clinic visits. She had frequent severe insulin reactions and was in diabetic acidosis three times during the course of her disease. She took insulin irregularly, was unhappy about her disease and pessimistic about her future because her mother and her sister had diabetes and were poorly controlled. Her economic status was also poor.

Case No. 9 died of typhoid fever, and was in fair control during ten years of clinic visits and in fair control six months preceding his death. He had frequent mild insulin reactions and was in diabetic acidosis twice during the course of his disease. He was indifferent toward diabetes, but his family tried to give him good care. His economic status was poor.

Case No. 11 died of appendicitis 2⅔ years after the onset of her disease. She had been in poor control and had had frequent, moderately severe hypoglycemic reactions. She came from a family of ten children in which the economic status was very poor, and she had had little parental supervision in the management of her disease.

Case No. 12 died of a bilateral otitis media, complicated by meningitis. She was in fair control during three years of clinic visits and in fair control six months preceding her death. She had had occasional severe insulin reactions and was in diabetic acidosis twice during the course of her disease. She was well adjusted, but her mother felt that insulin was not essential in treating her, and the family's economic status was poor.

Case No. 14 died of pneumonia and was in fair control during five years of clinic visits and during the six months preceding her death. She had frequent, moderately severe insulin reactions, and was in diabetic acidosis once during the course of

her disease. Her family's economic status was poor, and her mother was not well adjusted, had a below-average intelligence and supervised the patient poorly.

Case No. 18, a one-year-old boy who died of pneumonia after having had diabetes for seven months, had been in poor control and died at the time of his first admission to University Hospitals. He had had no episodes of hypoglycemia or diabetic acidosis.

Case No. 22, who also died of pneumonia, was in fair-to-poor control during two years of clinic visits and in poor control six months preceding his death. He had occasional mild insulin reactions, and was in diabetic acidosis several times. His family's economic status was poor, his parents had separated, he was very dependent on his mother, he was a behavior problem, and he had an I.Q. of 80.

Case No. 26, who died of pneumonia, was in fair control during one year of clinic visits. He had occasional severe hypoglycemia and two episodes of diabetic acidosis. Because of low income, the boy's family had difficulty in buying insulin for him.

Case No. 34 died of an acute ruptured appendix followed by peritonitis, and was in fair control during five years of clinic visits. He had occasional episodes of mild hypoglycemia. The family and the patient showed little interest in controlling the disease adequately.

Case No. 39 was a 2½-year-old girl who developed viral hepatitis. Her autopsy showed massive necrosis and fatty degeneration of the liver. She had been in fair-to-good control preceding her death. She was seen in the Pediatric Clinic at the onset of her disease and had been very difficult to control because of repeated infections and occasional severe episodes of hypoglycemia. She had been born to an unmarried 17-year-old girl who later married the father of the baby. Emotionally, the mother was very unstable, and she had considerable difficulty in accepting the baby.

The majority of the eight deaths from diabetic acidosis either were the result of negligence on the part of the patient or his family, or occurred at the onset of the disease. And half of these patients had been in diabetic acidosis two or more times. Case No. 13 received her first insulin and diet treatment in the Pediatric Clinic one year after the onset of her disease and did not return for follow-up. She was in fair control until three months before her death, when she discontinued insulin on the advice of a faith healer. When she developed diabetic acidosis, three months later, her parents refused medical help. She had had no hypoglycemic episodes and was in diabetic acidosis twice. The family income was low, but the home social environment was fair, and the patient was well adjusted and intelligent. The mother had an I.Q. of 88 and had numerous psychosomatic complaints.

Case No. 15 was a five-year-old girl who had had symptoms of diabetes one month and was semicomatose on admission to University Hospitals for initial control of the disease. She died during the first 48 hours of her hospitalization, despite treatment with insulin, Hartman's solution, Ringer's solution and 5 per cent glucose. She received no fluids containing potassium, and, in this case, a potassium deficiency was possibly the cause of her death. There were nine children in her family, and the income was small and irregular.

Case No. 17 was a young man who had an I.Q. of 57 and was in a state institution for the mentally deficient from time to time during the eleven years preceding his death. He had frequent moody spells during which he refused food and insulin, he was in diabetic acidosis several times, and he had frequent severe insulin reactions.

Case No. 24 received no treatment for 1½ years and was seen at University Hospitals 4½ years after the onset of her disease. She was in fair-to-poor control during the course of her disease and was in diabetic acidosis several times. She had an I.Q. of 70, but was stable emotionally. Her family didn't always have sufficient money to buy insulin for her. She developed diabetic acidosis, which was followed by pneumonia as the terminal event.

Case No. 35 developed a convulsive disorder at 6½ years of age, one year after the onset of her diabetes, and had I.Q.'s of 108 and 69 at ages 6 and 12 years, respectively. She had frequent insulin reactions throughout the course of her diabetes, but it was repeatedly demonstrated that she had convulsive seizures at times when her blood sugar was high enough to be well out of the range of hypoglycemic reactions. Phenobarbital and Dilantin therapy decreased the frequency and severity of her convulsive episodes. She was in diabetic acidosis several times. The social status of her family was fair, but its economic status was very low.

Case No. 37 developed diabetes at 6½ years of age and was not seen in this clinic until 3½ years later. His I.Q. was 45 on admission. His developmental history was normal, but an electroencephalogram performed at his first admission was abnormal, probably as a result of brain damage due to insulin reactions. There were eight children in his family, and there often was insufficient food or clothing for all of them.

Case No. 38 was under the care of a chiropractor at the time of death and was receiving no insulin. There were eight children in the family, and the economic status was low.

Case No. 40 developed diabetes 1½ years after poliomyelitis had left her with severe residual paralysis. She was in fair control during eight months of observation at the Pediatric Clinic. Her mother felt that moving to a warmer climate would improve the child's diabetes and would decrease her need for insulin. We do not know

whether or not the youngster was taking insulin immediately prior to her death.

Case No. 8 died of hypoglycemia and was in fair-to-good control during two years of observation in this Clinic. He had occasional mild insulin reactions and no episodes of diabetic acidosis. His father was a minister, and the social and economic backgrounds were excellent. The attending physicians failed to treat the hypoglycemic episode adequately. The patient was taking protamine zinc insulin, which fact may account for the insidious onset of the insulin reaction.

Case No. 31 died suddenly of a vascular accident which was clinically diagnosed as coronary thrombosis. He died at the age of 27, after 13¾ years of diabetes in fair-to-poor control. He had occasional mild insulin reactions, but no episodes of diabetic acidosis. When he was examined by our research team, three weeks preceding his death, he had early cataract formation and diabetic retinopathy, a blood pressure of 160/72, and no albumin in his urine.[1] An electrocardiogram showed no abnormality.

Three of our series died of uremia resulting from Kimmelstiel-Wilson degeneration of the kidneys. One diagnosis was clinical, one was confirmed by autopsy, and the third by kidney biopsy taken at the time of a decapsulation procedure, two years preceding death. These patients had had diabetes 21 to 23 years, and had been in poor control most of the time. Case No. 10 had a fair social and a poor economic background. He was examined by our research team four years preceding his death, at which time he had a proliferative retinitis, 4+ albumin in his urine, a blood pressure of 140/100, and calcification in the blood vessels of his legs.[1] A few months preceding his death, he was completely blind, his blood pressure was 200/100, and his electrocardiogram was normal. Case No. 27 was seen in this clinic for the first time after she had had her disease 18¾ years. She had been taking insulin, but she was not checking her urine and she had inadequate dietary regulation. At examination, she had albumin in her urine, a blood pressure of 150/90, and a hypertensive retinopathy. Case No. 30 had frequent mild insulin reactions and had been in diabetic acidosis six times during the course of her disease. She took insulin irregularly and had inadequate dietary regulation. After two years of diabetes, she began developing cataract changes in the lenses of her eyes, and after nine years she had albumin in her urine and a blood pressure of 140/80. Diabetic retinopathy was noted when her disease was of 18 years' duration.

Case No. 32 died of tuberculosis in 1938 after having maintained no more than poor control of her diabetes throughout its course. She developed tuberculosis following her last visit to the Pediatric Clinic in 1931. Case No. 36 died of tuberculosis after having maintained poor control of her diabetes. When she made her last visit to the Pediatric Clinic in 1931, she did not have tuberculosis.

Two of our series of cases died of accidental causes unrelated to their diabetes.

In five of the cases, we did not have sufficient information to determine the cause of death. On the death certificate for Case No. 2, the cause of death was said to have been "diabetes mellitus." Case No. 3 drowned in 12 inches of water, but an aunt who observed the patient's actions immediately preceding the drowning felt that he was having an insulin reaction. The patient had had frequent, moderately severe episodes of that sort throughout the course of his disease. Case No. 4 had what was clinically diagnosed as panhypopituitarism, and the diagnosis was confirmed at autopsy, but the terminal event is unknown, for she was not under supervision at Iowa City. The cause of death in Case No. 6 was recorded on the death certificate as "pneumonia," but the patient's mother feels that the symptoms immediately preceding death were those which she had observed when the girl had an insulin reaction. The patient had had frequent moderately severe insulin reactions, and her I.Q.'s, obtained at the onset of her disease and following severe insulin reactions three years later, were 105 and 92, respectively. Case No. 16 died while being transported to the hospital for treatment, and no autopsy was performed. Information available from his parents suggests that he died of a massive infection, diabetic acidosis, insulin reaction, or a combination of those factors.

AGE AT ONSET, SEX, FAMILIAL INCIDENCE AND INTELLIGENCE QUOTIENTS

The average age of onset in our series of 40 patients was 8.1 years, and the range was from 0.3 to 14.2 years. Girls made up 52.5 per cent of the cases. Familial incidence of diabetes in this series was 53.8 per cent, and 25.6 per cent of the patients reported that members of their immediate families had diabetes. Familial incidence is reported by Kerr, Brown and Kalant and by John as 44 per cent and 31.5 per cent, respectively.[6, 10]

Intelligence quotients, which were determined for 29 of our patients, showed 31 per cent below average and 28 per cent above average. It is interesting that four of the eight patients who died of diabetic acidosis had below-average I.Q.'s.

AUTOPSY FINDINGS

Autopsies were performed on 7 of our series of 40 cases. Table 4 shows the cause of death related to the duration of the diabetes at the time of the patient's death. These were routine autopsies, and no special staining procedures were done on pancreatic tissues.

Because Case No. 4 did not die at University Hospitals, we have no information as to the cause of death. We do know that she demonstrated panhypopituitarism in addition to her diabetes. Au-

topsy findings included: hypoplasia of the breast, uterus, pancreas, pineal gland and adrenals; agenesis of the ovaries; degeneration of the kidneys; fatty infiltration of the liver; and osteoporosis.

TABLE 4

DURATION OF DIABETES, AGE AT DEATH, AND PATHOLOGIC CAUSE OF DEATH

Case No.	Duration Disease at Death yr.-mo.	Age at Death yrs.	Cause of Death
4	14-6	23	Unknown. Clinically patient had panhypopituitarism.
12	7-6	18	Streptococcic meningitis.
18	0-7	1	Lobar pneumonia.
27	22-8	25	Extensive glomerulosclerosis and generalized arteriosclerosis.
29	8-5	20	Massive liver necrosis.
34	5-4	7	Localized peritonitis.
39	2-1	2.5	Acute massive necrosis of the liver.

In 1936, 7½ years after the onset of her disease, Case No. 12 died of a bilateral otitis media, complicated by meningitis. The autopsy findings of interest in relation to her diabetes consisted of a pancreas that showed interstitial fibrosis, fibrotic lobules and a scarcity of islands of Langerhans. The coronary vessels and dorsal aorta were grossly normal, and the kidneys showed no microscopic degenerative changes.

Case No. 18 died of pneumonia seven months after the onset of his diabetes, and abnormal findings were reported only in relation to the infection, with the pancreas, aorta and kidneys reported as normal grossly and microscopically.

Case No. 27 died of uremia due to renal failure. The kidneys showed changes of intercapillary glomerulosclerosis, with 95 per cent of the glomeruli fibrosed. The dorsal aorta and coronary vessels showed moderate atheromatous changes, and the intima and media of the arteries and arterioles of the kidneys, spleen and pancreas were hyalinized and thickened. Fatty degeneration was present in the liver, and a decreased number of islet cells was demonstrated in the pancreas.

Case No. 29 died as a result of injuries received in a car accident 8½ years after the onset of his diabetes. His coronary vessels, aorta, kidney and pancreas were reported normal grossly and microscopically.

Case No. 34 died of an infection following a ruptured appendix 5½ years after the onset of his disease. He demonstrated a soft, atrophic pancreas, with fibrotic islets. The coronary vessels, aorta and kidneys were reported normal.

Case No. 39 died of an infection, and the pancreas was reported grossly atrophic, with a normal microscopic appearance. The coronary vessels, aorta and kidneys were reported normal. There was massive hepatic necrosis of viral type, or that resulting from ingestion of exogenous poison such as phosphorus.

DISCUSSION

The incidence of diabetic acidosis was high in the cases presented, quite as one would have expected in a poorly-controlled group of diabetic patients. We feel that poor social and economic backgrounds, as well as lower levels of intelligence, are factors in the inability of these patients to maintain fair-to-good control of their disease.

Our study indicates that poorly-controlled diabetic patients are unlikely to die of an insulin reaction, for the one patient whose death was so attributed died after faulty medical management. This is an interesting finding, in that several patients in this series were having frequent insulin reactions. In treating juvenile diabetic patients, one should avoid frequent insulin reactions, especially severe hypoglycemic episodes. Three patients had permanent brain damage resulting from frequent severe hypoglycemic episodes.

The juvenile diabetic patient should be helped to attain as high a level of control as is possible. Social, economic and psychological factors, as well as the diabetic condition itself, are limiting factors in reaching the ideal goal of excellent control.

Jackson *et al.*[1] have maintained that good control is essential in the juvenile diabetic patient if early onset of degenerative lesions in the blood vascular system are to be avoided. Four of our series of cases demonstrate the advanced cardiovascular-renal degenerative changes which can be expected to occur after 15 to 20 years of poorly controlled diabetes. The autopsy findings in three of the cases suggest that few cardiovascular-renal degenerative changes can be found in poorly controlled diabetic patients who have had their disease less than ten years.

Infection, which accounted for 39.3 per cent of the deaths in our series, seems no longer to be a particularly important cause of mortality, for only two of those deaths occurred subsequent to the generalized use of antibiotic therapy. Pneumonia was the most frequent fatal infection encountered in our series of cases. Tuberculosis accounted for 7.1 per cent of our deaths, which is a lower incidence than that reported by Joslin and Wilson in 1950.[3] The relatively low incidence of tuberculosis in the Iowa population may be a factor in our findings.

SUMMARY

Case histories of 40 deaths, in a group of 411 juvenile diabetic patients observed at the State University of Iowa Pediatric Clinic from 1920 to 1950, are presented.

Causes of death included: infection 39.3 per cent; diabetic acidosis 28.6 per cent; kidney disease 10.7 per cent; tuberculosis and accidental death each 7.1 per cent; and hypoglycemia and vascular accident each 3.6 per cent. Infection or diabetic acidosis accounted for the majority of deaths in patients who had had diabetes less than

ten years; cardiovascular-renal disease accounted for 40 per cent of the deaths in patients who had had diabetes more than ten years.

The majority of the patients maintained fair-to-poor control of their diabetes and had poor social and economic backgrounds.

Autopsy findings indicate that no significant cardiovascular-renal pathology occurs in patients who have had poorly controlled diabetes less than ten years.

BIBLIOGRAPHY

1. Jackson, R. L., Hardin, R. C., Walker, G. L., Hendricks, A. B., and Kelly, H. G.: Degenerative changes in young diabetics in relationship to level of control. Pediatrics, **5**:959-970, (June) 1950.
2. Moriyama, I. M.: Is diabetes mortality increasing? U. S. Public Health Rep., **63**:1334-1339, (Oct. 8) 1948.
3. Joslin, E. P., and Wilson, J. L.: Lessons for future treatment from 472 fatalities in diabetic children. Brit. M. J., **2**:1293-1296, (Dec. 9) 1950.
4. White, P., and Waskow, E.: Clinical pathology of diabetes in young patients. South. M. J., **41**:561-567, (June) 1948.
5. Joslin, E. P.: Status of living diabetics with onset under 40 years of age. J.A.M.A., **147**:209-213, (Sept. 15) 1951.
6. Kerr, R. B., Brown, G. D., and Kalant, N.: Follow-up study of juvenile diabetics. Canad. M. A. J., **66**:97-104, (Feb.) 1952.
7. Dublin, L. I., and Marks, H. H.: Mortality from diabetes throughout the world. Characteristics and trends. Diabetes, **1**:205-217, (May-June) 1952.
8. Lombard, H. L., and Joslin, E. P.: Certification of death of 1,000 diabetic patients. Am. J. Digest. Dis., **14**:275-278, (Sept.) 1947.
9. Bell, E. T.: Postmortem study of 1,214 diabetic subjects with special reference to vascular lesions. Proc. Am. Diabetes Assn., **10**:62-82, 1950.
10. John, H. J.: Statistical study of 6,000 cases of diabetes. Ann. Int. Med., **33**:925-940, (Oct.) 1950.
11. Reed, J. A.: Statistical analysis of deaths among diabetics in the District of Columbia for a period of 42 years (1903-1944 inclusive). M. Ann. District of Columbia, **17**:262-271, (May) 1948.
12. Root, H. F., Bland, E. F., Gordon, W. H., and White, P. D.: Coronary atherosclerosis in diabetes mellitus. Postmortem study. J.A.M.A., **113**:27-30, (July 1) 1939.
13. Current diabetes problem. Statistical Bulletin, Metropolitan Life Insurance Co., **34**:5-7, 1953.
14. Heintzelmann, F.: Cause of death in diabetes mellitus. Ugesk. f. Laeger, **114**:560-565, (May 1) 1952. Da.
15. Dry, T. J., and Tessmer, C. F.: Postmortem findings in cases of diabetes. Minnesota Med., **24**:96-105, (Feb.) 1941.

State University of Iowa College of Medicine

Clinical Pathologic Conference

December 1, 1954

SUMMARY OF CLINICAL FINDINGS

A 17-YEAR-OLD, white boy was first admitted to University Hospitals because of a four-year illness. His first symptoms had been vomiting, fever and headache, which lasted for only two days. Two weeks later he had noted redness of his face, particularly below his eyes, over his cheeks and around his lips. Those symptoms persisted to the time of his admission, and although the flush paled somewhat at times, it gradually became worse. One year before admission, he had noted swelling of a knee, and later a swelling of the interphalangeal joints, soreness of the toes and fever. The joint pains persisted to the time of his admission, although they varied somewhat in association with treatment. On the day before admission, he had vomited, but had experienced no associated abdominal pain.

When the rash first developed, it had been treated with "acne shots." Later, unidentified pills had no effect. Two months before his admission, he had begun taking cortisone, 75 mg. a day for one month, with alleviation of joint swelling and pain. When it was discontinued, the joint pains returned.

Prior to the onset of the illness under consideration, the patient had been in general good health, having suffered only an occasional sore throat and the usual infectious childhood diseases.

The physical examination revealed discrete, one-centimeter cervical and axillary lymph nodes, a red, scaly rash over the entire face and ears, and a few fading red areas, with slight scaling, on the upper arms. There was slight injection of the conjunctivae. The heart and lungs were normal, the blood pressure was 120/70 mm. Hg., and the abdominal examination revealed tendernes only in the region of the spleen. Both of the patient's hands were somewhat stiff and weak, and in both of them there was enlargement of the proximal interphalangeal joints. His body temperature was 102°F., his pulse rate was 90 per minute, his respirations were 20 per minute and his weight was 131 pounds.

Urinalysis showed a specific gravity of 1.007-1.018, the pH was 6, the albumin and sugar were negative, and the microscopic examination revealed 6 red blood cells and 2 white cells per high power field. The hemoglobin was 11.6 Gm. per 100 ml., the red blood cell count was 3.9 million per cu. mm., and the white blood cell count was 3,650 per cu. mm., with a normal differential count. The erythrocyte sedimentation rate was 77 mm. per hour. The platelet count was 150,000 per cu. mm. The Kolmer serologic test for syphilis was positive, with a quantitative titer of 1:8, but the VDRL and the Kline were negative. Total serum proteins were 7.73 Gm. per 100 ml., with albumin 3.77 Gm. and globulin 3.96 Gm. per 100 ml. The

blood urea nitrogen was 12 mg. per 100 ml., and the creatinine was 1 mg. per 100 ml. An electrocardiogram and a chest X-ray film were normal. Because aspirin, in a dose of ten grains every four hours, was ineffective in relieving the joint swelling and pain, it was discontinued after three days. The patient was then given cortisone, 50 mg. orally every six hours.

In a few days, the symptoms abated and the elevated temperature fell. In six weeks he was improved enough to go home. After discharge, he continued taking cortisone, 12.5 mg. every six hours. For the next eight months, he was followed in the clinic approximately at monthly intervals. During that period, he had minor exacerbations of his joint pains, but for the most part they were controlled by intermittent increases and reductions of cortisone. At the end of the ninth month, he received a scalp laceration and a blow to the chest in an automobile accident. When he was seen in the clinic, a chest X-ray film showed no evidence of injury. The hemoglobin was 11.5 Gm. per 100 ml., the red blood cell count was 4.1 million per cu mm., and the white blood cell count was 3,150 per cu. mm., with a normal differential count. The urinalysis showed a specific gravity of 1.020, and the albumin, sugar, blood and microscopic examinations were negative. Because the patient seemed in no way incapacitated, he returned to his job and continued taking 25 mg. of cortisone three times a day.

The patient stated that one week after the accident he had a cough and a fever of 102°F which lasted three or four days. He received penicillin injections for five days and some "sedative" pills for two days. He noted some swelling of his face and eyes two days prior to admission. There was very little arthralgia, but considerable malaise, nausea and vomiting. On admission, two weeks after the accident, his temperature was 103°F., his respiratory rate was 24 mm., his pulse was 84, and his blood pressure was 125/95 mm. Hg. He had a slight erythema of the face, with considerable puffiness around the eyes and below the mandible. Carious first and second left lower molars were noted. The lungs were normal. Examination of his heart revealed a sinus rhythm, and no enlargement. Laboratory examinations showed a hemoglobin of 8.2 Gm. per 100 ml., a red blood cell count of 3.3 million per cu. mm., and a white blood cell count of 4,800 per cu. mm., with a normal differential count. The erythrocyte sedimentation rate was 86 mm. per hour. The urine contained 2+ albumin.

One week later, the two carious molars were extracted, and at that time the hemoglobin was 9 Gm. per 100 ml., the red blood cell count was 3.3 million per cu. mm., and the white blood cell count was 6,900 per cu. mm., with a normal differential count and a sedimentation rate of 89 mm. per hour. Four days later, there were no changes in the hemoglobin and red blood cell count, but the white blood cell count was noted to be 950 per cu. mm., with only a few lymphocytes present in the peripheral blood smear. The erythrocyte sedimentation rate remained elevated, and the platelet count had fallen to 36,000 per cu. mm. During the following week the white blood count dropped to 50 cells per cu. mm., all of which were lymphocytes, and the platelet count dropped to 16,000 per cu. mm. The hemoglobin was as low as 5.3 Gm. per 100 ml., and the red blood cell count was 2.1 million per cu. mm. A chest X-ray film taken at the time of the patient's second admission showed an increase in the size of his heart. An electrocardiogram showed inversion of the T wave in leads I, aVI and V5-6, and a prolonged QTc interval. The serum sodium was 126.4 mEq., and the potassium 5.5 mEq.

After the dental extractions, the temperature remained normal for a week, but then started to rise. The tooth sockets did not heal, and a painful dry socket and osteitis persisted for the next two weeks. Before the onset of the pancytopenia, the patient was receiving aspirin and chloral hydrate, with codeine, Dramamine and Acthargel. When the severe leukopenia was noted, penicillin and streptomycin were started. Terramycin was added later, and blood transfusions and immune globulin were also given.

In spite of these medications, the patient's condition deteriorated. The fever returned, an erythematous rash appeared on the dorsum of his hands, and his pulse rate ranged between 100 and 120 per minute. His heart was enlarged to the left anterior axillary line, and there was a gallop rhythm and diminution in the heart sounds. Edema developed in his ankles, and crepitant rales were detected in his lung bases. The liver was also enlarged.

He was given mercuhydrin and digitalis, with no improvement. The Acthargel was decreased to 20 units daily and was discontinued, after two weeks, when it was replaced by cortisone 50 mg. every six hours. The patient received several blood transfusions. Blood cultures were negative. The white blood cell count remained low for 20 days, and then on the twenty-first day it rose to 9,550 per cu. mm. The differential count was 13 per cent lymphocytes, 32 per cent monocytes, 45 per cent myelocytes, 1 per cent basophiles, 1 per cent nucleated red cells, and 8 per cent unclassified. The platelet count also increased to 80,000 per cu. mm. One day later, the white blood cell count was 27,000, the hemoglobin was 8.6 Gm. per 100 ml., the red blood cell count was 3.2 million per cu. mm., and the total serum proteins were 5.85 Gm. per 100 ml., with 2.48 Gm. albumin and 3.37 Gm. globulin per 100 ml. The bone marrow was hypocellular, with a large number of reticuloendothelial cells. An electrophoretic plasma analysis revealed: albumin 27 per cent, alpha$_1$ globulin

ACH



ACHROMYCIN has proved effective against:

Pharyngitis
Acute Bronchitis
Tonsillitis
Pertussis
Otitis Media
Scarlet Fever
Osteomyelitis
Epidermal Abscesses
Acute Brucellosis
Pancreatic Fibrosis
Typhus Fever
Sinusitis
Gonorrhea
Bacillary Dysentery
Pneumonia with or without Bacteremia
Bronchopulmonary Infection
Acute Pyelonephritis
Chronic Pyelonephritis
Mixed Bacterial Infections
Soft Tissue Infections
Staphylococcal Septicemia
Pneumonoccal Septicemia
Urogenital Tract Infections
Acute Extraintestinal Amebic Infections
Intestinal Amebic Infections
Subacute Bacterial Endocarditis

ROMYCIN*

HYDROCHLORIDE
Tetracycline HCl *Lederle*

A TRULY BROAD-SPECTRUM ANTIBIOTIC

Clinical research has proved ACHROMYCIN to be effective against more than a score of different infections, including those caused by Gram-positive and Gram-negative bacteria, rickettsia, certain viruses and protozoa.

In addition to its true broad-spectrum activity, ACHROMYCIN provides more rapid diffusion than certain other antibiotics, prompt control of infection, and the distinct advantage of being well tolerated by most persons, young and old alike.

ACHROMYCIN, in its many forms, was accepted by the medical profession in an amazingly short time. Each day more and more prescriptions for ACHROMYCIN are being written when a broad-spectrum antibiotic is indicated.

Lederle LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U.S. PAT. OFF.

10.9 per cent, alpha$_2$ globulin 16.7 per cent, beta globulin 17.8 per cent, fibrinogen 12.5 per cent, and gamma globulin 15.1 per cent. Total bilirubin was 1 mg. per cent. At the time of recovery of the leukocyte count, the peripheral blood revealed anisocytosis, poikilocytosis of erythrocytes, marked toxic changes in the myeloid series, large toxic granules in basophilic cytoplasm, and some abnormally large platelets. The blood picture was thought compatible with a leukemoid reaction.

Although the patient's leukocyte count returned above normal levels, he continued to have a rapid pulse and to show signs of cardiac failure. On the fourth week of his hospital stay, he started to vomit blood, and within a matter of minutes he expired, before transfusions and other resuscitative measures could be instituted.

CLINICAL DISCUSSION

Dr. Paul M. Seebohm, Medicine: The case presentation today pertains to a 17-year-old boy who entered the hospital with two major complaints: a rash on the face for four years, and joint pains and swelling for one year. He also gave a history of questionable fever on and off, and a five-pound weight loss during this period. At the beginning of his illness, four years earlier, he had vomited but was free from gastrointestinal symptoms of any significance until several days before his admission to the hospital, when he again vomited. A summary of his physical and laboratory findings is essentially as follows: a rash on the face and arms; temperature of 102°F; enlargement of the proximal interphalangeal joints; hematuria; anemia; leukopenia; elevated sedimentation rate; a positive Kolmer test for syphilis; and hyperglobulinemia. The physicians who saw him at that time considered brucellosis, tuberculosis and syphilis as possible causes, but eliminated those chronic infectious diseases, mainly because of the character of the skin rash and the lack of cultural data. The initial impression was either rheumatoid arthritis, rheumatic fever or lupus erythematosus. Because the fusiform deformity of the joints was inconsistent with rheumatic fever, a determination of the exact character of the rash was important in distinguishing rheumatoid arthritis from lupus erythematosus.

Dr. Christian E. Radcliffe, Dermatology: From the clinical description, you have no doubt picked out the typical features in the picture of acute or subacute disseminated lupus erythematosus. Before the L.E. phenomenon was developed, a great many—at least a third—of these cases were thought to arise from a typical discoid lupus erythematosus. But we now see cases in which a skin rash has developed only after several years of prodromal symptoms involving various and sundry joints, usually—as in this case—the smaller joints. On his admission, this boy presented very characteristic eruption on his face, on his arms and on the V of his neck.

During his hospital stay, the biopsies of his skin that we studied were fairly typical. If you select lesions that have been present from two to three months, biopsy will show a fairly characteristic change in the involved areas, with a relative and absolute hyperkeratosis, a little atrophy or thinning of the epidermal layer, some liquefaction necrosis of the basal cell layer, vascular dilatation in the upper part of the cutis and some small round-cell infiltrate.

During this boy's stay, we wanted to try out a new test to see whether or not we could confirm some findings that had been reported during the year 1952, in which an artificial blister was produced on the skin by the use of cantharides cerate.* A cantharides paste is applied to the skin for a period of 3-3½ hours, and then the paste is removed and the area is protected with a plastic cup. After 24 hours, the roof of the resultant blister can be incised, the base of the lesion scraped lightly with a dermal curet, and some of the fluid taken out with a syringe and smeared onto a glass slide. When the slide has been air-dried and colored with Wright's stain, a very peculiar cell can be seen that simulates the L.E. The polymorphs will be seen with the nucleus crowded to one side, and then, within the polymorph, will be inclusion masses. The color of the inclusion masses is a robin's-egg blue. These, instead of being large, single, rounded inclusions, as would be found in typical L.E. cells, may be multiple and quite distinct or confluent. When we performed the test on this patient, we found cells of the predicted sort, and also found the L.E. cells in his peripheral blood.

The L.E. cell is a big help, of course, in diagnosing some of these people who have rather bizarre histories and findings. We have a 16-year-old girl in our outpatient clinic now who has had some migratory symptoms since she was eleven. She was seen by a pediatrician at the time when they first appeared, and was diagnosed as a case of rheumatic fever. Her joint symptoms subsided, and she had relatively little further trouble until about a year ago. Then she had a recurrence of her arthralgia and had a very typical lupus eruption on her face. The biopsy of the skin lesion on her face was highly typical microscopically. That girl has been controlled quite well with cortisone over the intervening year, but even though she is on cortisone, is feeling much better and is able to carry on some school work, her sedimentation rate remains high.

We feel that the cortisone is probably a morbistatic agent and that we do not affect the course of the disease a great deal by using it. Although the disease can be a great imitator, producing gastrointestinal symptoms, toxic encephalopathy,

---

* Watson, J. B., O'Leary, P. A., and Hargraves, M.: Neutrophils resembling L.E. cells in artificial blisters. AMA Arch. Dermat. and Syph., 63:328-333, (Mar.) 1951.

and vague aches and pains around the chest, it causes no damage that will show up on an X-ray film. Its course can be extremely bizarre and rather protracted.

At least two-thirds, if not more, of these people whom we see with a disseminated disease are young women, and they seem to have their most acute manifestations during active menstruation.

The man who is under discussion today responded quite well to therapy early in his disease, and did quite well for a year. When he returned at the end of that time, he was extremely ill, and he died rather abruptly. In the differential diagnosis, we do see quite a number of lupus erythematosus cases in which there has been seborrhea prior to the eruption, but seborrhea is so common that I do not think it has any particular significance. We see a great many patients who have histories of insult to the skin. It may be a severe acne, and you will recall that this boy's ailment was once diagnosed as acne. Or we may have a very serious sunburn at the onset. We have had a few cases in whom acute manifestations were precipitated by the therapeutic use of ultraviolet light in doctors' offices.

For the most part, the eruption will confine itself to the exposed areas of the body: the face, especially those areas of the face that get the most sunlight; the V of the neck; the ears; the sides of the neck; and the exposed areas of the arms. A generalized eruption occasionally appears on the trunk, in a patchy fashion, the lesion being erythematous, with a slight amount of scaling. If a single lesion in the disseminated disease persists long enough, it will be highly characteristic microscopically, and it may produce some atrophy. Atrophy, however, is not the rule in the disseminated group. The lesions are quite capricious, for they will appear in one area on the neck, and then, within a period of three or four weeks, vanish, only to reappear in another locale.

One other thing mentioned in the protocol was that this young man had a positive serology on admission. The Kolmer was 1:8, and the other tests—VDRL and Kline—were negative. Those findings constitute the reverse of a true luetic picture. The Kolmer test is the least sensitive of the three. The VDRL, which was named for the Venereal Disease Research Laboratory, is another microscopic test, but it is much more sensitive than the Kolmer. Under the circumstances, I should be strongly inclined to regard the Kolmer reading as a biologic false positive. There are precedents for such an interpretation, although false positive Kolmers aren't common in lupus erythematosus.

Dr. Jack M. Layton, Pathology: Do people with discoid lupus have L.E. cells in their bone marrow?

Dr. Radcliffe: They do not.

Dr. H. Russell Meyers, Surgery: What is the etymological derivation of the word *lupus?*

Dr. Radcliffe: The word is a misnomer. *Lupus* means "wolf," and *erythematous* means "red." Thus, in lay terminology, the name can be translated "red wolf disease."

Dr. Raymond F. Sheets, Medicine: Do you find the same cells in the cantharides blister when the pathology is discoid lupus?

Dr. Radcliffe: No.

Dr. Richard L. Gross, Resident in Medicine: The L.E. cell phenomenon was first described by Hargraves, in 1948.* In his original paper he described both it and the tart cell phenomenon, and it is in the differentiation between those two cell types that much of the difficulty with false-positive reaction has occurred. The L.E. cell is an *in vitro* occurrence, the end result of a lytic, phagocytic process. The L.E. cell factor, which is a nucleolytic agent present in the gamma globulin fraction of patients with disseminated lupus erythematosus, is activated by some anomalous occurrence *in vitro* which Hargraves believes has something to do with coagulation of the blood. When this L.E. cell factor is activated, the involved cell, usually a mature poly, shows swelling of the nucleus and autolysis, with final disintegration of the cell into a homogeneous, smudged mass. Other polys—normal, mature ones—then clump around this disintegrated mass and engulf all or parts of it to produce the final L.E. cell. The final appearance, then, is a mature poly with the nucleus pushed toward the rim and the cell filled with the homogeneous, smudged material which takes stain poorly.

The differentiation of this cell from a tart one is of greatest importance. "Tart cell" was the name given by Hargraves to the process of nucleophagocytosis. It is a non-specific process seen in many blood preparations, not only in disseminated lupus but in other diseases as well. It is probably only a manifestation of increased phagocytic activity. The classic tart cell in bone marrow is a monocyte or small histiocyte that has ingested a second nucleus, perhaps a lymphocyte, but, in contradistinction to the one in the L.E. cell, this second nucleus retains its normal chromatin structure. In some cases, however, it is very difficult, if not impossible, to differentiate the two cell types in any one particular cell. It is only on examination of many different cells that differentiation becomes clear.

Hargraves also emphasizes that in differentiating the two, one should look for the whole L.E. cell phenomenon, rather than just for an L.E. cell type as an added feature. With the new two-hour peripheral blood clot technic that is being advocated, Hargraves feels that the danger no longer lies in failing to find enough false-negative reactions, but

* Hargraves, M.: Disseminated lupus erythematosus and L.E. cell phenomenon, Postgrad. Med., **16**:163-174, (Sept.) 1954.

in mistakenly accepting false-positive reactions, for in the technic itself there is enough disintegration of cells to produce many tart cells as well as L.E. cells. Tart cells produced by this technic are usually mature polys, and the second nucleus is dense and piknotic, with a heavy border, and these factors can be used in differentiating it from the L.E. cells. The L.E. cell is probably still specific for disseminated lupus erythematosus, despite the scattered reports of false-positive reactions. If all the criteria of nucleolysis are met, then there should be no false-positive reaction.

The technic that is now being used here is a two-hour peripheral blood clot procedure. We draw 5-10 cc. of venous blood, allow it to clot for two hours, mash it through a fine-mesh screen to defibrinate it, then centrifuge it and make a smear from the buffy coat. This process is felt to give more positive reactions than the formerly used heparinized bone marrow. Figure 1 is a slide demonstrating a typical L.E. cell. There is a well developed L.E. cell there; the nucleus is pushed to the rim, and the cell is filled with this smudged homogeneous matter. This patient had L.E. cells in both the heparinized bone marrow and in the peripheral blood.

Dr. Seebohm: Because of the characteristic rash of disseminated lupus, the multiple system involvement and the characteristic L.E. cells in the blood, the physicians caring for the patient made the diagnosis of disseminated lupus erythematosus and started treatment with cortisone. As a matter of fact, the physician who referred the patient to the hospital suggested that diagnosis. He had treated the patient with cortisone for approximately a month before admission. During the ensuing eight months, approximately 75 mg. of cortisone a day kept the symptoms under reasonably good control. However, during that period the L.E. cell remained in the peripheral blood, and the sedimentation rate stayed well over 80 mm. per hour.

The last admission occurred approximately eight months after the diagnosis had been made. Several weeks before then, the patient stated that he had had an upper respiratory infection. His family physician gave him penicillin and discontinued the cortisone. During the 38 days following his readmission to this hospital, one question that disturbed us was whether the patient had an infection. He certainly had fever and a history of respiratory symptoms, but his white count was normal. An X-ray of his chest, and the physical examination of his chest and heart were entirely normal. He complained of pain in his jaw, and upon examination we found two markedly carious teeth that were thought to have apical root infection. On the other hand, there was a possibility that he had an exacerbation of the lupus erythematosus which could be manifested by an elevated sedimentation rate and fever, thus simulating an infection.

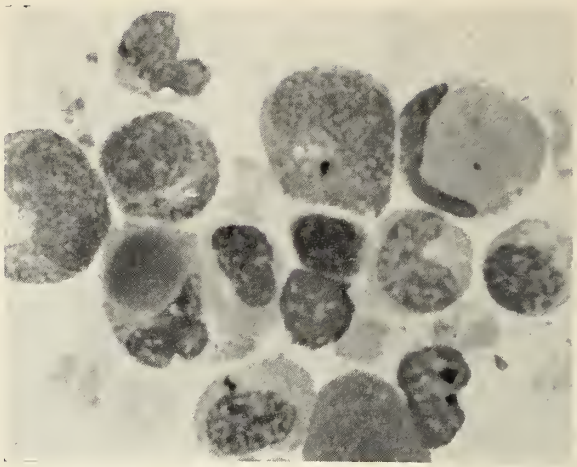


Figure 1. Typical L.E. cell is shown in the right upper corner.

At first, because of the fear of infection, cortisone and ACTH were withheld. However, after the patient's chest had been found to be clear and his white count normal, an exacerbation of his lupus seemed likely. On the fifth hospital day, he was started on ACTH at the rate of 120 mg. a day. The pain in his jaw became quite severe, and on the ninth hospital day a dental extraction was done. A white count, done the day before that procedure, was within normal limits. The carious teeth were removed, but during the rest of his hospital course, the patient had considerable difficulty with the healing of his jaw. There was bone-and-gum separation, sequestration of bone, and osteitis. Following the extraction, his his temperature came down and remained normal for a week. It should be noted that he had had the ACTH for five days before this fall. His white count fell first to 950, then to 50, and remained there for the next 10 to 15 days.

His physicians at that point were in somewhat of a dilemma. He had leucopenia and a jaw infection. Would ACTH help the former more than it would spread the latter? They elected to decrease the dosage, fearing to enhance the infection, even though several blood cultures taken on the nineteenth and twentieth hospital days were negative. Penicillin was started at the time of the dental extraction, and later it was increased to a level of 400,000 units every four hours until the time of his death.

What was the cause of the leucopenia? Because agranulocytosis of this type is often thought to be related to a drug, his drug history was reinvestigated and found to include codeine, aspirin, Dramamine, ACTH and penicillin. None of these substances were considered good suspects on the basis of previous experience, but all drugs except the ACTH and the antibiotics were discontinued. When his ACTH was reduced, he had another rise in temperature, and again the dilemma faced us:

was the infection spreading, or was the lupus erythematosus becoming aggravated? The latter was favored, and ACTH, Terramycin and streptomycin were given. Shortly after that point in his course, he developed rales and wheezes in his chest, gallop rhythm and other signs of congestive failure. His weight, however, did not increase appreciably, and his urinary output was sustained. However, because of some signs of increase in fluid retention, the ACTH was replaced by cortisone on the thirtieth hospital day. The white count started to rise, and on the thirty-seventh and thirty-eighth days returned to 9,000 and 27,000, respectively. There were about 45 per cent myelocytes in the peripheral blood at the time of the rise of the white count.

A severe anemia, which occurred during the leucopenic period, was treated with blood transfusions. The immunological capacity of the altered plasma proteins to combat infection was questioned. Electrophoretic studies of the plasma were made to determine any quantitative defects in the globulin.

Dr. Joseph I. Routh, Biochemistry: Since many of you are not acquainted with the electrophoretic patterns for plasma protein, I thought it might be of interest to present them so that they may provide you a basis for evaluating the readings obtained for this patient. The normal values are: 60 per cent albumin; 5 per cent alpha$_1$; 9 per cent alpha$_2$; 11 per cent beta; 5 per cent fibrinogen; and 10 per cent gamma. These are the values for the patient under discussion: 27 per cent albumin; 10.9 per cent alpha$_1$; 16.7 per cent alpha$_2$; 17.8 per cent beta; 12.5 per cent fibrinogen; and 15.1 per cent gamma. You can readily see that a normal electrophoretic pattern or analysis of plasma proteins gives you values entirely different from those exhibited by this patient. Our records contain patterns on more than 30 patients who have been diagnosed as having lupus erythematosus, and a check of the literature revealed that in general, plasma albumin is decreased and gamma globulin and alpha$_2$ globulin are increased during the disease. In this case, there is a definite decrease in albumin; and the alpha$_1$, alpha$_2$, beta, fibrinogen and gamma globulin are all increased at slightly differing ratios. Specifically, we had more than double the normal alpha$_1$, less than double the alpha$_2$ and the beta, more than double the fibrinogen, and again less than double the gamma globulin. According to the literature, one should see a high alpha$_2$, a low albumin and a high gamma. After one gives cortisone or ACTH, the albumin increases toward normal, and the gamma globulin decreases toward normal, but the alpha$_2$ does not change. Most of the 30 or 40 cases in our files gave values similar to those shown by this patient, instead of the abnormally increased alpha$_2$ reported in the literature. A few typical cases, with a definite increase in alpha$_2$ were found in our group. The electrophoretic pattern is a help in differentiating lupus erythematosus from rheumatoid arthritis and rheumatic fever. The readings are similar, but the variations from the norm are a little more definite for lupus erythematosus than they are for the two other entities. The total proteins show a reversed A/G ratio, and that reversal can easily be spotted from the electrophoretic pattern on no more than a superficial examination.

To sum up this brief report, I should say that the electrophoretic analysis of this patient seems rather typical of lupus erythematosus, for although it can be very difficult electrophoretically to pinpoint any one of these three diseases and give a positive diagnosis, the findings certainly fit with those for other cases that we have in our files and for the cases that have been reported in the literature.

Dr. Seebohm: Because, after the white count and the temperature had returned to normal, there were signs which suggested heart failure, the patient was digitalized. Nevertheless, residual wheezes and rales were still audible in the chest, and a chest X-ray was taken on about the thirty-seventh hospital day. Dr. Forbes will review the chest X-rays taken during the patient's initial and final admissions.

Dr. Stephen A. Forbes, Radiology: As stated in the protocol, the chest X-ray findings were entirely normal on the patient's first admission. Films taken the following year continued to show no abnormality, either in the heart size or in the lung fields. However, during his second admission four months later, a very definite increase in heart size was noted, with a cardiothoracic ratio of .54. The enlargement was apparently generalized. Several months later, the films showed an increase in the size of his heart. The bronchovascular markings then indicated mild congestion. A final film taken that same month, just before the patient's terminal event, showed a very definite area of consolidation involving the right upper lobe, as well as a dense infiltrate throughout the right lung. A patchy consolidation was identified along the left border of the heart. The impression was that of pneumonia involving the right upper and left lower lobes as well, in the presence of the previously-noted mild cardiac enlargement.

Dr. Seebohm: At that point in the patient's course, the general decisions and actions of the physicians seemed to have been justified. The patient appeared to be considerably improved, but then, after breakfast, he suddenly vomited a huge amount of blood and expired within minutes.

Pathologist's Report

Dr. Layton: The histological sections of the heart showed small arteries and arterioles sur-

rounded by swollen, edematous connective tissue in which there was cellular infiltrate, chiefly large mononuclear cells. Fibrinoid degeneration and necrosis and hyalinization were not conspicuous, and their lack of prominence seemed to indicate that cortisone or corticotrophin had affected the inflammatory response. Large areas of ischemic necrosis of the myocardium were related to the perivascular inflammatory reaction. In the older area, replacement fibrosis had occurred, but in other areas, active dissolution of muscle fibers was striking. These phenomena would seem to account for the relatively intractable cardiac failure.

Although sections of the kidneys showed thickened, glomerular basement membranes with fibrinoid degeneration and necrosis in arteriolar walls, and patchy areas of replacement fibrosis in the cortex, renal failure was not a problem because of the large number of unaffected tubules.

The cortical atrophy of the adrenal glands was due principally to degenerative changes in the zona fasciculata and the zona reticularis. The zona glomerulosa was relatively unaffected.

A species of Candida—not C. albicans, but probably C tropicalis—was cultivated from the pulmonary and gastric lesions. From the host response to this organism, it was concluded that the yeast was a pathogen, rather than a contaminant. The extensive use of cortisone and broad spectrum antibiotics may predispose to moniliasis, complicating the primary disease.

In summary, I should say that this was a case of disseminated lupus erythematosus in which the terminal course was complicated by moniliasis. Death was due to massive bleeding from gastric ulcers. Extensive fibrinoid degeneration and necrosis, and the other alterations in connective tissues which are usually observed in untreated cases, were not found in a striking degree. Cortisone and corticotrophin therapy probably had the effect of diminishing them.

SUMMARY OF NECROPSY FINDINGS

At autopsy, the body was that of a thin, white male. The skin of the face presented a mottled brown, scaling discoloration in a "butterfly" distribution. In addition, numerous pits, scars and acneform lesions were present over the entire face, with loss of hair in the right eyebrow. Bloody froth covered the mouth, nose and right cheek. Pustules painted with gentian violet were present on the dorsum of each hand and wrist. A large post-extraction defect involved the left lower alveolar ridge in the region of the first and second molars.

The heart was enlarged (425 Gm.), with interstitial edema and perivasculitis. Hemorrhagic, necrotizing pneumonitis, with abscess formation, was present in both lungs. The enlarged spleen had patchy areas of necrosis. The stomach contained about 500 ml. of clotted blood, and when it had been evacuated, two ulcers, each about 3 cm. in diameter, were apparent on the greater curvature in the fundus region. One of these had eroded through most of the gastric wall. Hyperplasia and/or metaplasia of myeloid tissue was present in the bone marrow, lymph nodes, spleen and liver. Atrophy of the adrenal cortex was apparent, particularly in the zona fasciculata and the zona reticularis. Occasional areas of fibrinoid degeneration and necrosis were noted in small blood vessels throughout the body and in glomerular capillaries, but these lesions were not conspicuous when compared with those usually observed in an untreated case of lupus erythematosus. Mild perivascular fibrosis and lymphocytic infiltrates were scattered through the body.

NECROPSY DIAGNOSES

1. A condition consistent with disseminated lupus erythematosus during cortisone therapy.
2. Hemorrhagic, necrotizing pneumonitis, associated with Candida infection.
3. Cortical atrophy, both adrenals.
4. Gastric ulcers.
5. Myeloid metaplasia, spleen, liver.
6. Chronic pyelonephritis, mild.
7. Atrophy of testes.
8. Degenerative changes, skeletal muscle.

Dr. Seebohm: As Dr. Layton mentioned, most patients with lupus who die are victims of renal failure. Since the BUN was only 26, terminally, this patient apparently was saved from renal failure only to die of a complication of hormonal therapy. Are there any questions?

Student: Is there any relationship between exposure to light and exacerbation of lesions other than ones in the skin?

Dr. Radcliffe: Yes. Sunlight can bring on systemic manifestations markedly and acutely. We usually give these patients appointments late or early in the day, so as to let them travel during the relatively dark part of the day, or at night. They are cautioned about exposure at home, even being told not to go near the windows. They must keep the shades drawn, and sleep in the bed farthest from a window. Exposure to natural sunlight or to ultraviolet therapy can bring on acute systemic manifestations.

Dr. Henry E. Hamilton, Medicine: Is there any relationship between discoid lupus and disseminated lupus erythematosus?

Dr. Radcliffe: There are a few cases that start out with what appears clinically to be discoid lupus but later proves to be disseminated. The L.E. studies, sedimentation rate, *et cetera* help prove the diagnosis.

Dr. Ignacio V. Ponseti, Orthopedics: Has cortisone changed the course of the disease?

Dr. Radcliffe: We think it is probably morbistatic. In other words, it will control the symptoms.



THE 1955 ANNUAL MEETING

Elsewhere in this issue will be found the program of the 1955 Annual Meeting of the Iowa State Medical Society. It offers a great deal that is new and of interest to the physicians of Iowa. The section chairmen and the Committee on Scientific Work are to be congratulated on obtaining outstanding speakers and teachers. Most of the lecturers are so well known to Iowa physicians that they need little publicity. Dr. George T. Pack, of Memorial Hospital, New York, is to give the Erskine Lecture on Monday morning. He is to be followed by Dr. J. Roswell Gallagher, chief of the Adolescent Unit of Children's Medical Center, Boston; Dr. Francis T. Hodges, president of California Physicians' Service; and Dr. Armand J. Quick, professor of biochemistry at Marquette University.

On Tuesday morning, Dr. Roy E. Nicodemus, of Danville, Pennsylvania, and Dr. E. Stewart Taylor, of Denver, will discuss obstetric and gynecologic problems. They will be followed by Dr. J. B. McNaught, of Denver, Dr. Elmer Hess, of Erie, Pennsylvania, president-elect of the AMA, Dr. Lee T. Ford, Jr., of St. Louis, and Dr. Dean M. Lierle, of SUI.

Wednesday morning, the program promises to be an excellent one, starting with a lecture by Dr. Charles C. Higgins, of Cleveland. Then lectures by Dr. Dwight E. Harken, of Boston, Dr. Fay H. Squire, of Chicago, and Dr. Harold C. Lueth, of Evanston, follow. Dr. Lueth will discuss emergency medical service in case of disaster, a subject of which we all should know more, even though we regret the necessity for such knowledge.

The Society meets for the first time this year in the new Veterans Memorial Auditorium, in Des Moines. After having been restricted to small quarters for many years, the members should be delighted with the excellent facilities afforded by the new building. The entrance will be at the west (Fifth Avenue) side of the building, which opens on the arena floor. Here will be the technical and scientific exhibits, a room for scientific movies, and lunch facilities.

On the floor directly above, reached by ramps and stairs, there are two very large meeting rooms, five rooms large enough for section meetings and luncheons, and many smaller rooms for committee meetings. All of the special luncheons will be served in the Auditorium, and there will be an eating area for physicians who do not plan to attend any of the special events. The House of Delegates will also meet in the Auditorium, both on Sunday afternoon and on Wednesday morning.

Blue Shield is celebrating its tenth anniversary this year, and its Board of Directors is bringing a special speaker from California to talk to the general sessions. In addition, it is planning an anniversary social hour and buffet dinner for participating physicians and their wives for Monday evening. Other groups have cancelled their plans for dinners that evening in order that all members may attend the Blue Shield function.

Dr. Caughlan plans to bring an inspirational speaker for the Tuesday evening banquet, which, as in the past, will be held in the Grand Ball Room at the Hotel Fort Des Moines.

The technical exhibit section should be one of the largest that we have ever had. The scientific exhibit section is booked to capacity at this time. The University is bringing 28 exhibits, and 24 others, which are also scheduled, will bring the total to 52. A moving picture theatre will be in continuous operation near the scientific exhibit section.

The House of Delegates has many problems confronting it. Its sessions will be open to all members, and it is hoped that many physicians will "sit in" on the reports and deliberations so as to learn at first hand what is being done by the delegates and officers to solve the problems.

All in all, the meeting offers a great variety of food for thought—scientific, economic, legal and social. Every member should find some type of inspiration to reward him for his attendance.

COORDINATING POSTGRADUATE EDUCATION

Late in December, the Committee on Medical Education and Hospitals held a joint conference with the committee on postgraduate education of the SUI College of Medicine, and representatives of the Iowa Academy of General Practice, State Department of Health and Veterans Administration, to discuss future programs of postgraduate education. As a preliminary step toward integrating the offerings, the Committee will begin editing a list of coming medical meetings for publication in the JOURNAL.

It is hoped that the regular printing of such a list will prevent conflicts in the scheduling of scientific meetings in adjacent communities, and, in addition, will help the physician select the program which will be most worth while to him, personally. All groups presenting scientific programs of a postgraduate nature have endorsed the idea and promised to support it.

The Committee on Medical Education and Hospitals is vitally interested in an evaluation of post-

graduate education. It is concerned particularly with the question of what type of program is most effective. It wonders whether we may be having too many meetings in the state, and it hopes by studying the problem this year to arrive at some conclusions about the course of programs to be offered next year. It feels that possibly a joint effort by several agencies would provide a better course than the composite of meetings sponsored by individual agencies now provides.

Experiments will be made with new concepts of education—on a limited scale, at first—in order to determine whether they have merit. The program envisioned by the Committee is a long-range one. Indeed, ten years will be required for its complete activation.

MEDICAL USES OF ATOMIC ENERGY

"The Contribution of Atomic Energy to Medicine," a 188-page transcript of hearings before the Subcommittee on Research and Development of the Joint Committee on Atomic Energy of the United States,* unlike most government pamphlets, makes fascinating reading. One encounters entirely new and unfamiliar terms, such as *lutecium, holmium, rubidium, gallium* and *thulium,* but one doesn't find any bureaucratic gobbledegook.

Through the utilization of nuclear reactions and all of the other aspects of nuclear science, the scope of medical knowledge is being broadened immeasurably. There are three major aspects of the application of atomic energy to medicine. One is the investigation of biologic processes, themselves. The second comes closer to the individual patient, for it deals with the utilization of atomic-energy technics in the diagnosis of disease. The third is its utilization in the treatment of disease in its many different forms.

Radio isotopes are radiation-treated elements that have the same chemical properties as ordinary elements and behave just like them in all respects, except in that they are radio-active. But that characteristic permits their being readily traced wherever they are carried. Consequently, physicians are provided an extraordinarily useful tool for following vital processes and for providing curative radiation, not only from the outside, as we have been doing for many years by means of the X-ray and radium, but internally as well.

The Geiger-Müller counter, which is best known as the ready field tool of the uranium prospector, is, in a modified form, an elaborate instrument for the making of very careful measurements in the clinical laboratory. The isotopes, themselves, are potentially dangerous because of their radioactive properties, but through them, and the counter that traces them, it is possible to determine how a certain drug is utilized, where it tends to accumulate and what sorts and amounts of break-down products are made of it by the body. An attempt is being made to conduct a balanced program (1) in basic clinical investigation and developmental clinical testing in animals and human patients, (2) in the internal administration of isotopes, (3) in the external application of radiation from isotopes, (4) in the improvement of already-known isotopes and (5) in the search for new ones.

By the use of radioactive iodine, one can diagnose with increased accuracy the type of disorder in the thyroid gland. Radioactive gases have been used to study "bends," a malady that affects divers and high-altitude fliers, and to measure the circulation in the brain when an individual is undergoing the tremendous acceleration of supersonic flight, where the chance of blackout is the pilot's principal limitation. Technics that permit the tracing of these gases and many other substances within the brain, by virtue of their radioactive properties alone, are yielding information basic to an understanding of such vital problems as the senile psychoses, cerebral palsy and epilepsy, the localization of brain tumors, and the phenomena of coma, sleep and anesthesia.

Radioactive isotopes are outstandingly useful in studies of the formation of teeth and bone and of the interesting role fluorine plays in calcium metabolism and in the prevention of dental caries.

Lack of space prevents the enumeration of all the other amazing facets of radiation medicine. It would appear that the eating of spinach will influence the symptoms of osteo-arthritis, a fact which suggests that in youngsters, spinach may compete with the bones for calcium. The relation of the formation of cholesterol in the development of high blood pressure and atheroma, the effects of radiation upon the blood stream, the determination of body volume through studies of body fat and body water, the effects of the complete removal of the pituitary, the development of the scintogram, the benefits of teletherapy machines, studies of cobalt in relation to a curiage machine, and the biosynthesis of radioactive drugs of medicinal importance—all of these show the vast scope of current investigation.

We can take pride in the fact that Iowa is making its contribution to this unfolding drama. Senator B. B. Hickenlooper is the vice-chairman of the Joint Committee on Atomic Energy. And Dr. Frank Spedding, at the Iowa State College Institute for Atomic Research, has developed a method for the production of thulium, a substance which can be substituted for the metals previously used for isotopes and which, in the amounts that are necessary is between $50 and $100 less expensive.

As a by-product of the experiments conducted with radioactive gases at the State University of Iowa, it has been discovered that xenon is a practical anesthetizing agent. It has been employed successfully during two appendectomies at University Hospitals, Iowa City.

* Government Printing Office, 1954.

COST ACCOUNTING IN AN IOWA HOSPITAL

What does the word *serum* mean? To the public, at least, it connotes a rare and costly experimental fluid, packaged in vials and flown northward by a heroic bush pilot in a ski-equipped plane. Somewhere along the shores of Hudson Bay, the plane is set down on a strip hacked out of the wilderness, and is met by a parka-clad doctor, complete with dog sled. The serum is transferred, the whip cracks, the dogs "mush"—and eventually the stricken settlement is saved.

This is as it should be. But imagine the public, this time supine in a hospital bed, checking an item in a hospital bill—"Serum: $41.50." How come? No plane flew, no dogs "mushed," and the doctor wore a pin-striped suit. The supine public had just had a Cesarean section and didn't recall any serum.

Actually, the word *serum* on the hospital bill covered such items as whole blood, intravenous fluids, or plasma. To make the matter yet more confusing, if any actual serum had been administered to the patient, it would have appeared on the bill disguised as "drugs." The public, still supine and now groggy, has considerable difficulty in following such sleight of hand.

The patient has a right to a hospital bill based upon and expressed in terms of sound cost-accounting. But charges made on such a sound basis and expressed in standard terms are not as yet to be found in Iowa. Physicians have felt that the "losses" sustained in operating certain hospital areas were being underwritten by inordinate profits from other areas—especially those involving the services of physicians. It is interesting, then, that at the request of its board of trustees, one Iowa hospital has engaged a firm of CPA's to carry out a study of its operations for a one-year period. The figures resulting from that study are summarized below.

Since the hospital admits about 15,000 patients a year, its volume is such that it should not be compared directly with smaller hospitals throughout the state. Nevertheless, its experiences are a valuable index.

Attention is first directed to the column "Allocated Expenses." These are the indirect ones, such as heat, light, water, housekeeping, accounting, administration, medical library, medical records, telephone, etc. The figures are based either upon the area serviced, or upon unit usage of the service or item. Depreciation is included—two per cent per year on the physical plant, and a regular schedule of depreciation on equipment.

"Direct Expense," more or less obviously, is the actual cost in wages and materials of operating the specific area.

Items 1 through 4—i.e., nursing service, medical and surgical care (interns and resident physicians), patient diets, and occupational therapy—are those usually thought of by physicians as "floor care." The expense of this large area of hospital service was $1,329,691.68. The income to this area is from daily care (room rent), nursery, oxygen ($19,704 for the year), intravenous solutions, dressings and miscellaneous "take home" items. These amounted to $1,436,347.28, leaving a "profit" of $106,655.60. The figures from other specific hospital departments are self-explanatory. The final figure, when in parentheses, is a "loss."

Areas of special interest are 5. Delivery Room, 6. Electrocardiography, 9. Laboratory, 10. Operating Room, 11. Pharmacy, and 14. X-ray.

Item 13. School of Nursing, shows a "loss" of $228,011.46. This deficit is not significant, for no value has been placed upon the services of the student nursing corps, so far as this study is con-

COST FINDINGS IN AN IOWA HOSPITAL
Fiscal Year of August 1, 1953—July 31, 1954

Cost Center	Direct Expense	Allocated Expense	Total		Income	Income Over or Under Expense Amount*	Per Cent
1. Nursing Service	$ 420,825.55	$ 488,954.22	$ 909,779.77				
2. Med. & Surg. Care	29,739.67	31,764.46	61,504.13	$1,329,691.68	$1,436,347.28**	$106,655.60	+ 7
3. Dietary—patient meals only	253,683.32	97,424.24	351,107.56				
4. Occupational Therapy	4,973.03	2,327.19	7,300.22				
5. Delivery Room	36,689.96	37,651.14	74,341.10		57,826.00	(16,515.10)	−21
6. E.K.G.	6,792.81	3,042.87	9,835.68		17,887.50	8,051.82	+81
7. E.E.G.	2,331.68	1,303.31	3,634.99		5,310.00	1,675.01	+46
8. Emergency	9,638.73	9,235.88	18,874.61		21,904.19	3,029.58	+16
9. Laboratory	168,828.29	67,917.36	236,745.65		260,388.50	23,642.85	+ 9
10. Operating Room	101,897.20	78,279.04	180,176.24		140,496.89	(39,679.35)	−33
11. Pharmacy	143,010.07	14,291.72	157,301.79		281,970.66	124,668.87	+79
12. Physical Therapy	21,453.72	12,772.42	34,226.14		24,099.12	(10,127.02)	−30
13. School of Nursing	44,768.91	199,139.95	243,908.86		15,897.40	(228,011.46)	−94
14. X-ray	109,650.38	45,771.29	155,421.67		162,545.65	7,123.98	+ 4
TOTAL	$1,354,283.32	$1,089,875.09	$2,444,158.41		$2,424,673.19	($19,485.22)	
Non-Operating Expenses			86,511.58				
Non-Operating Income					112,623.98	45,597.62	
			$2,530,669.99		$2,537,297.17	$ 6,627.18	+.25
Net Income to Surplus as per Auditor's Report 7/31/54				$2,530,669.99			
				$ 6,627.18			

* Amounts in parentheses are "deficits."
** Daily Care, Nursery, Oxygen, Solutions (CS), Dressings, Misc.

cerned. In a separate study, a value of $218,000 was placed on those services. Such a value would necessarily be added to nursing-service expense, and thus the School of Nursing would almost "break even."

As one reaches the summation of the various expense and income columns, he notes that the total expense of the hospital for one year is $2,444,158.41. On the other hand, the income is $2,424,673.19—an overall loss of $19,485.22. However, thanks to non-operating income—i.e., gifts, endowments and interest—an added $26,112.40 has been realized. Thus, by means of charity, a loss is converted into a "profit" of $6,627.18, or 0.25 per cent on a $2,500,000 business!

Cost accounting, like medicine, is not an exact science, and it must be recognized that other accountants might arrive at somewhat different conclusions from the same data. The prime value of the audit is that it has been made! Its purpose is to provide a base line for future comparisons. Therefore, one may ask what lessons are to be learned from this single study. Perhaps they fall into the following statements:

1. Cost-accounting principles should be adopted more nearly universally by hospitals, for only in this manner can their managers recognize where income from patients meets or fails to meet costs.
2. Areas of hospital operation in which income from patients either exceeds or falls short of the "break even" point by more than 10 per cent might advantageously be examined by the medical staff, as well as by the administrators and trustees.
3. No one pays his hospital bill "in full." In the final analysis, it is the charity of neighbors, friends and "just plain people" that makes up the difference.
4. Perhaps the supine public would understand, and so prefer, a bill consisting of cost-plus charges from each hospital department.

"PRESCRIPTION FOR MEDICAL PARTNERSHIPS"

"Prescription for Medical Partnerships," a general information booklet on the business details of establishing and continuing a group medical practice, has been prepared by Dr. Charles Maertz, retired medical director of The Union Central Life Insurance Company. A copy can be obtained by writing to "Medical Partnerships," Field Service Division, P. O. Box 179, Cincinnati 1.

AMERICAN GOITER ASSOCIATION

The annual meeting of the American Goiter Association will be held at the Skirvin Hotel, Oklahoma City, on April 28, 29 and 30, 1955. Papers and discussions will deal with the physiology and diseases of the thyroid gland.

IOWA LAGS IN A.M.E.F. GIFTS

Dr. T. F. Thornton, of Waterloo, the Iowa State Medical Society's representative at the meeting of the American Medical Education Foundation, in Chicago on January 23, reports that the fund for the aid of medical schools must secure additional donations. The AMA's budget will no longer permit its making $500,000 yearly gifts in addition to paying the Foundation's operating expenses, which have been exceeding $100,000 annually. Contributions from individual doctors, from state and county medical societies, and from medical auxiliaries must be increased, both in number and in amount, to make up for the anticipated reduction in the AMA's share, and also to match the gifts from business firms, some of which have been made contingent upon physicians' continuing their donations.

It costs a medical school $13,500 to put a student through his course. Although in the case of state schools most of that sum comes out of taxes, and as taxpayers many of us have thus been contributing to the support of our *alma mater,* almost none of us has much more than begun to repay the actual cost of our medical education.

No one is likely to send any of us a bill for our training, with compound interest at four, five or six per cent added on to it, but there are other and wholly adequate reasons why we should remember our debt and repay it in as large installments as we can possibly manage. Medical schools need money to keep the good teachers whom they now have, and to attract others to their faculties. There are costly new therapeutic tools that youngsters must be trained to use. Ordinary operating expenses have increased and are likely to drain the schools' budgets even further.

The spectre of socialism hangs over the medical schools even more closely than it does over us doctors as individuals. The federal government is likely to make increasing amounts of money available to medical schools, and where the federal government gives money, it takes ever increasing degrees of control.

The state medical society in Utah has added $20 a year to its membership dues in order to raise funds for the A.M.E.F., and the Illinois society has done something similar, Dr. Thornton reports. While the Iowa State Medical Society is assessing its members $10 a year to build up its own student loan fund, it probably won't be able to add appreciably to the $1 per member per year that it is giving to A.M.E.F. as a memorial to Dr. Baldridge and Dr. Beye. But individual physicians, we hope, will dig down into their pockets, and the state and county auxiliaries would be well advised to start money-raising projects to help bear the growing costs of medical education.

President's Page

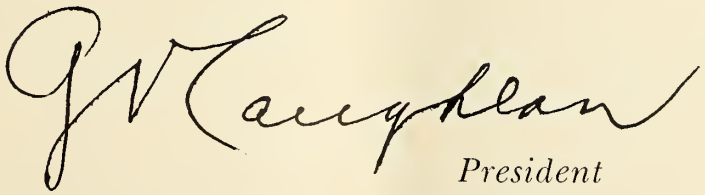
Never has the threat to our profession been so ominous as now. The expanded Hill-Burton Act, together with the regulations that the Health, Education and Welfare Department has set up for its administration, presents an awesome picture to organized medicine and to physicians. Apparently it is designed to place hospitals in control of the practice and medicine, and, so far as professional work is concerned, to make physicians their captives. That intention is manifested by the portion of the law that provides for the setting up of diagnostic and treatment centers.

In addition, as everyone is aware, the Iowa Hospital Association, represented by 25 of its member hospitals, has brought suit in Polk County to have a declaratory judgment by the courts as to the control of pathology and radiology in the hospitals.

Many societies and many physicians are beseeching the Iowa State Medical Society to take measures to combat these menaces to our profession. Needless to say, the officers of the Society and the headquarters staff are doing everything possible to combat them and to bring about a favorable decision in the courts and in the legislature.

But their efforts are not enough. EVERY MEMBER OF THE IOWA STATE MEDICAL SOCIETY MUST MAKE EVERY EFFORT TO BRING ABOUT A FAVORABLE SENTIMENT TOWARD HIMSELF AND HIS PROFESSION AT THE LOCAL LEVEL. IT IS EVERY DOCTOR'S FIGHT.

To secure favorable publicity in his community, each physician must address service clubs, veterans' organizations, lodges, church groups and farm organizations. And in addition, he must talk with his patients of the peril that his profession is facing. The public must be told that when medicine becomes socialized, it is probable that other sections of our economy will follow along. From that point, it will be no more than a short step to communism and dictatorship for America.



President

Iowa Academy of General Practice

President—Frank D. McCarthy, M.D., Sioux City
President-Elect—William M. Sproul, M.D., Des Moines
Vice President—Charles A. Nicoll, M.D., Panora
Secretary-Treasurer—Donald H. Kast, M.D., 720 Bankers Trust Bldg., Des Moines
Executive Secretary—Mrs. Elizabeth B. Nelson, 3600 Franklin Ave., Des Moines

REPORT FORMS

All active members of the American Academy of General Practice recently received a letter from the Executive Secretary explaining how to send in their reports.

Your completed 1954 report of postgraduate medical studies should appear in the space provided on your 1954 membership card. As soon as your 1955 membership card arrives, send your 1954 card to the Academy headquarters office.

Please be sure you have listed all of your medical studies and have carried the totals forward. Sign and date the card, and mail it to the American Academy of General Practice, Broadway at 34th Street, Kansas City 11, Missouri.

It is most important to keep a record of your studies in your AAGP file.

SYMPOSIUM ON DISEASES OF THE HEART

Hotel Savery
Des Moines, Iowa
Thursday, May 19, 1955

Morning Session, Frank D. McCarthy, M.D., Moderator

9:00-10:00 Registration
10:00-10:30 "Recent Advances in Heart Physiology"
Matthew N. Levy, M.D., assistant professor of physiology, Albany Medical College, Union University, Albany, New York
10:35-11:05 "Electrocardiography in General Practice"
J. Scott Butterworth, M.D., associate professor of medicine, New York University Postgraduate Medical School, Bellevue Medical Center, New York City
11:10-11:40 "Indications for Heart Surgery"
Dwight E. Harken, M.D., assistant clinical professor of surgery, Harvard Medical School, Boston, Massachusetts
11:40-12:10 Questions and Panel Discussion

Luncheon

12:30- 2:00 Speaker: William B. Hildebrand, M.D., Menasha, Wisconsin, president, American Academy of General Practice

Afternoon Session, C. A. Nicoll, M.D., vice-president, Iowa Academy of General Practice, Moderator

2:15- 2:45 "Bacterial and Inflammatory Diseases"
Leo Loewe, M.D., assistant clinical professor of medicine, State University of New York College of Medicine, New York City
2:45- 3:15 "Degenerative and Metabolic Diseases"
Walter S. Priest, M.D., associate professor of medicine, Northwestern University Medical School, Chicago, Illinois
3:15- 3:30 Coffee Recess
3:30- 4:00 "Rehabilitation of the Patient With Cardiovascular Disease—An Increasing Community Responsibility"
Joseph G. Benton, M.D., associate professor of physical medicine and rehabilitation, New York University Bellevue Medical Center, New York City
4:00- 4:30 Questions and Panel Discussion
4:30- 5:30 Cocktail Reception

Five hours of formal credit will be allowed for this symposium. Wives of physicians are welcome and encouraged to attend.

IOWA CHAPTER LUNCHEON

Hotel Statler, Los Angeles
March 30, 1955, at 12:15

Amid the busy, bustling throngs at the AAGP Scientific Assembly, meeting with friends will help to bolster one's morale. In the past, the Iowa group has enjoyed getting together in this friendly manner. Most of the men bring their wives, thereby providing another opportunity for the ladies to meet those whom they hear about but seldom see.

Please plan to include this luncheon in your itinerary.

Seventh Annual Assembly of the American Academy of General Practice, Los Angeles, California, March 28-31

THE DOCTOR'S BUSINESS



Your Credit Policies

MILLARD K. MILLS

WATERLOO

After establishing your fee schedule and your procedures for explaining fees to your patients, you should next set up effective and ethical credit policies.

If you can begin your explanations about payment with the preface, "It is the policy of our office . . ." you can prevent the patient's feeling that he is being discriminated against, without limiting your freedom to make allowances for individual circumstances.

RATE YOUR PATIENTS

We recommend that credit reports be obtained as soon as it has been determined that patients are permanent. On the basis of those reports, you can rate them "A," "B" or "C." Both the individual's history card and his accounts receivable card should be so marked, and since people's paying habits seldom change, the marking probably will have to be done only once.

An "A" rating will mean that the patient can be given unlimited credit, provided that you explain to him the justification for any unusually large fee. A "B" will indicate that the patient's account is to be watched, and special arrangements should be made for his paying any major item. You should encourage him to pay as he goes along. A "C" will warn you that the patient is not inclined to pay his bills regularly. You will want to keep him on a current basis.

How does this work? When an "A" patient takes a $10 charge slip to your secretary, she thanks him, and if he says nothing about paying, neither does she. If he asks, she of course implies that she will be happy to accept payment that day, for she never misses an opportunity to encourage payment on the day that services are rendered!

When the patient belongs to the "B" group, she says, "Thank you, Mr. Brown." Then, reaching for her receipt book, she asks, "Would you like to take care of it today?" And if his answer is "No," she responds, "If you prefer to wait until the end of the month, that will be perfectly all right." Thus, she imputes to him a promise to pay at the end of the month.

To the "C" patient, she says, "Thank you, Mr. Smith. The charge is $10 for today." If he does not want to pay immediately, he will have to explain. She will then ask, "When do you wish to take care of it?" and his answer will bind him to a particular time. When the secretary says, "I'll note on your card that you will take care of this on ————," he knows that you, as well as she, will be aware of his promise.

STATE YOUR POLICIES

Tell each new patient that it is the *policy* of your office to send monthly statements, and when discussing financial arrangements, repeat, "It is our *policy* to have an understanding with our patients on the most convenient method of payment for them." No one takes offense at something that is a general rule for everyone.

When you deviate from standard procedure, let the patient know that you are doing so. If his financial condition won't permit his paying your full fee, he isn't likely to brag about having been allowed to pay less. Or if he does mention it, he will give you credit for your understanding, and thereby will win respect for you.

Your credit policies should be aimed at cultivating prompt-paying habits in your patients. Such education of patients is most important when times are good. If you let patients form poor ones during prosperity, their attitude when the going gets rough will be, "Dr. Jones doesn't care whether I pay him or not. I can let his bill ride." And they will come to that conclusion at the time when you need prompt payment most.

The next step in your financial program, then, is to set up effective credit procedures in your office and to follow them religiously!

Mr. Mills is general manager of Professional Management.

BLUE CROSS



BLUE SHIELD

Blue Shield to Celebrate Tenth Anniversary

The doctors of Iowa authorized the formation of Iowa Medical Service (Blue Shield) ten years ago on April 12, 1945.

Plans are underway to celebrate the occasion during the 1955 Annual Meeting of the Iowa State Medical Society.

The annual meeting of Blue Shield Participating Physicians will be held Monday evening, 5:00 P.M., April 25, in the new Veterans Memorial Auditorium, Des Moines.

Blue Shield will be host at a reception and buffet dinner at the Hotel Savery after the annual meeting of Participating Physicians. Plan to attend and help celebrate the occasion.

Since its founding, Blue Shield has paid $15,563,743.22 for professional services rendered its subscribers. At the present time approximately 95 per cent of the physicians in active private practice are Participating Physicians of Blue Shield.

Blue Shield, on December 31, 1954, had 190,395 contracts, covering a total membership of 484,235.

The Blue Cross Plans in Iowa will be celebrating their fifteenth anniversary this year.

We want to take this opportunity to thank members of the medical profession for their splendid cooperation and guidance, which has caused voluntary health plans of Blue Cross and Blue Shield to be highly successful in such a short period of time.

Through Blue Cross and Blue Shield, the medical profession can exercise a voice in the future economics of prepaid medical care in this state. We are thankful to members of the Board of Directors and Blue Shield Liaison Physicians who have given so freely of their time to guide the destiny of this movement.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

DRUGS IN CURRENT USE, 1955, by *Walter Modell*, M.D. (New York, Springer Publishing Company, Inc., 1955. $2.00).

PUBLIC RELATIONS IN MEDICAL PRACTICE, by *James E. Bryan*. (Baltimore, The Williams & Wilkins Company, 1954. $5.00).

REACTIONS WITH DRUG THERAPY, by *Harry L. Alexander*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $7.50).

PERIPHERAL VASCULAR DISEASES, by *Edgar V. Allen*, M.D., *Nelson W. Barker*, M.D., and *Edgar A. Hines, Jr.*, M.D., with associates in the Mayo Clinic and Mayo Foundation. (Philadelphia, W. B. Saunders Company, 1955. $13.00).

BOOK REVIEWS

HANDBOOK OF MEDICAL TREATMENT, Fourth Edition, ed. by *M. J. Chatton*, M.D., *S. Morgan*, M.D., and *H. D. Brainerd*, M.D. (Los Altos, California, Lange Medical Publications, 1954. $3.00).

When a book goes into its fourth edition, one can be sure that it is of excellent quality. This pocket-sized volume is written by nine authors from the San Francisco area. In it are included carefully itemized elements of treatment of diseases of all sorts. Multiple tables of normal values are included, as well as diets, antidotes, hints for the physician in handling cases, and proper nomenclature and code numbers of disease entities. The style is one of utmost brevity, associated with completeness of information for quick reference. Outline form is used in the entire book, with subheadings and underlining of important phrases. Tabs are placed opposite the beginning of chapters.

This volume is intended for the doctor's pocket or desk. Interns or residents would find it valuable, as would busy practitioners who need to know accurate detail "on the spot."—*Daniel A. Glomset*, M.D.

THE PHYSICIAN AND HIS PRACTICE, ed. by *Joseph Garland*, M.D., editor of the NEW ENGLAND JOURNAL OF MEDICINE (Boston, Little, Brown & Co., 1954. $5.00).

This is an unusual book on an important subject, presented in a businesslike manner. Obviously, the purpose for which it was compiled was to present to all doctors, but particularly to medical students and young practitioners, whatever may be of value in the experience of 18 men, each of whom has written on a subject of his own choosing, and one with which he is supposed to be familiar.

The authors consist of lawyers, practicing physicians, teaching physicians, physicians' wives, clinic directors, university purchasing agents and professional management consultants. The choice of subjects for essays is very good and is quite complete.

Most of the essays are of high quality and present valuable information and advice. But though the value of the book as a whole is fairly high, its quality has been dimmed somewhat by the fact that a surgeon has undertaken to write on general practice, and that he goes into pyrotechnics on semantics and adopts a wholly nihilistic attitude toward over 50 per cent of American doctors. The question then arises whether there may not be other chapters in the book that have been marred by an author's antagonisms or by his deficient acquaintance with the phase of the subject that he has chosen.

It is a good idea to read the book, but for information on general practice, at least, the reader should look somewhere else, unless his preconceived ideas coincide with those of the surgeon aforementioned. There is, definitely, another side to that story!—*William M. Sproul*, M.D.

PEDIATRIC DIAGNOSIS, by *Morris Green*, M.D., and *Julius B. Richmond*, M.D. (Philadelphia, W. B. Saunders Company, 1954. $10.00).

This book is largely in outline form, divided into five sections: (1) pediatric history, (2) physical examination, (3) signs and symptoms, (4) health supervision, and (5) an appendix consisting of growth charts.

The discussion of pediatric history is interesting. Emphasis is placed upon alert observation by the physician, and the authors point out that careful note of parental attitudes and actions often provides an insight into the child's problems, and that factual information may be useless in medicine without an acute insight and curiosity about human behavior and relationships.

The section dealing with the physical examination considers the various organ-systems separately, presenting brief discussions of normal variants, followed by differential considerations of the various abnormal findings. There are no details, nor are there any discussions of therapy, for those are outside the announced scope of the book. Frequent references to outstanding reports in the literature are made throughout the book and add greatly to its value.

The discussions of signs and symptoms are on the basis of differential diagnosis of many common problems confronted in the average pediatric practice, e.g., growth failure, fever, convulsions, anorexia, and abdominal pain. The considerations are concise and pleasingly complete.

This book will be of greatest value to the medical student, the intern and the resident preparing for examinations, and to the busy practitioner wanting to refresh his memory when considering the differential diagnosis of a problem. The index is complete enough to avoid confusion. The authors have given us a book which is not intended to be a complete reference, but rather is a means of clearing the cobwebs from a busy brain when it is undertaking to approach a differential diagnosis in a disciplined and systematic manner.—*M. E. Alberts*, M.D.

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1955, in Des Moines.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

GAMMA GLOBULIN IS SCARCE

As of the first week in February, 1955, the Iowa State Department of Health had supplies of gamma globulin for prophylaxis for measles and infectious hepatitis, and for poliomyelitis. It will continue to distribute the material to physicians as long as the supply lasts.

However, the U. S. Public Health Service announced on December 28, 1954, that after supplying gamma globulin for the past two years, the Office of Defense Mobilization would close its distribution program on December 31, 1954.

The American National Red Cross, in answer to a query from the Iowa Department of Health, telegraphed as follows: "Re your wire January 27. Distribution scheme entire country now being completed. Amount globulin available to Red Cross only that derived from salvaged and outdated blood of Regional Blood Centers. Amount will be much less than demand; hence distribution held up until fair allocation bid finished. Cannot make shipment now, as sufficient material not yet available."

Some small amounts of gamma globulin may be available to the Iowa Department through the National Foundation for Infantile Paralysis, according to a statement which that organization made on February 3. But, over all, it appears that gamma globulin, aside from that which may be available through the regular commercial channels, may become a "commodity in short supply."

Iowa physicians are given the above summary as a warning.

POLIOMYELITIS CASE RECORDS FOR 1954

Age	*Non Paralytic*		*Paralytic*		*Unspecified*		*Male*	*Female*	*Total*
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE			
0- 1 yr.	8	3	10	10	5	2	23	15	38
1- 2	10	4	13	12	6	1	29	17	46
2- 3	18	10	13	11	5	2	36	23	59
3- 4	20	13	17	8	7	5	44	26	70
4- 5	25	15	14	11	6	9	45	35	80
0- 5	81	45	67	52	29	19	177	116	293
5- 6	39	22	12	9	11	7	62	38	100
6- 7	32	11	18	8	8	5	58	24	82
7- 8	28	16	14	12	20	2	62	30	92
8- 9	15	8	12	4	6	3	33	15	48
9-10	19	10	8	8	2	4	29	22	51
5-10	133	67	64	41	47	21	244	129	373
10-11	12	9	12	5	10	2	34	16	50
11-12	17	14	16	11	3	1	36	26	62
12-13	12	7	12	4	3	0	27	11	38
13-14	13	11	9	8	2	1	24	20	44
14-15	12	3	6	5	3	3	21	11	32
10-15	66	44	55	33	21	7	142	84	226
15-19	29	31	24	21	15	15	68	67	135
20-24	26	30	11	24	9	12	46	66	112
25-29	20	33	29	24	7	12	56	69	125
30-34	9	17	14	15	12	6	35	38	73
35-39	14	11	11	11	1	3	26	25	51
40-44	3	7	4	4	0	2	7	13	20
45-49	3	2	0	1	2	0	5	3	8
50-54	0	0	0	2	1	0	1	2	3
55-59	1	0	1	3	1	0	3	3	6
60 +	0	1	0	0	0	0	0	1	1
Unknown	5	4	2	1	5	2	12	7	19
15 & up	110	136	96	106	53	52	259	294	553

Non Paralytic		*Paralytic*		*Unspecified*		*Grand Totals*		
Male	Female	Male	Female	Male	Female	Male	Female	Total
390	292	282	232	150	99	822	623	1445
682		514		249				

POLIOMYELITIS SUMMARY FOR IOWA

January 1, 1948 Through 1954

County	1948 Cases	1948 Rate*	1949 Cases	1949 Rate*	1950 Cases	1950 Rate*	1951 Cases	1951 Rate*	1952 Cases	1952 Rate*	1953 Cases	1953 Rate*	1954 Cases	1954 Rate*
Adair	3	23.7	6	48.6	7	57.5	1	8.2	8	66.2	—	—	4	33.3
Adams	2	20.1	3	33.8	2	22.8	1	11.7	9	106.7	—	—	2	24.1
Allamakee	2	11.1	5	30.4	9	55.0	2	12.3	11	68.1	8	49.0	13	80.8
Appanoose	2	8.4	7	34.9	1	5.0	2	10.5	6	32.2	3	16.2	8	43.9
Audubon	6	52.6	21	181.1	8	69.1	1	8.7	9	78.0	4	34.2	10	86.8
Benton	4	17.4	17	75.0	8	35.3	2	9.0	10	44.2	2	8.7	3	13.3
Black Hawk	15	16.8	57	58.1	38	38.1	21	20.4	118	112.3	16	15.2	38	36.6
Boone	16	52.9	9	32.0	8	28.6	3	10.7	28	100.8	1	3.9	13	51.1
Bremer	13	7.0	7	37.2	7	37.1	5	26.3	15	78.5	3	15.4	9	46.9
Buchanan	4	18.0	2	9.2	11	50.7	3	13.6	6	27.1	3	14.7	4	19.9
Buena Vista	17	81.7	9	42.8	7	33.1	6	28.2	49	229.0	5	22.9	4	18.6
Butler	2	10.9	8	46.0	16	92.3	2	11.5	31	179.6	4	22.9	5	29.0
Calhoun	9	51.2	22	130.5	10	59.5	9	53.4	61	363.6	6	35.6	19	114.3
Carroll	10	43.2	2	8.6	9	39.1	4	17.3	24	103.8	1	4.3	10	43.2
Cass	20	111.0	5	26.9	8	43.1	—	—	38	205.3	3	16.0	7	37.8
Cedar	1	5.8	8	47.6	10	59.5	8	47.3	21	124.1	3	17.5	5	29.5
Cerro Gordo	51	105.6	19	41.5	14	30.6	5	10.8	51	109.6	13	27.4	10	21.4
Cherokee	17	86.3	8	41.9	3	15.7	7	36.8	159	836.6	12	70.0	9	53.3
Chickasaw	3	19.0	7	46 1	9	59.3	2	13.1	39	256.1	2	12.9	4	26.3
Clarke	2	19.7	4	42.5	1	10.6	—	—	8	87.2	2	21.7	3	33.0
Clay	10	52.2	7	38.8	14	77.6	6	33.1	68	374.0	9	48.7	4	22.0
Clayton	1	4.1	14	61.8	10	44.4	3	13.5	14	63.3	13	58.4	21	95.7
Clinton	16	35.5	29	59.0	30	60.6	7	13.9	38	74.8	23	44.2	17	33.2
Crawford	27	134.1	3	15.1	10	50.7	5	25.5	38	194.3	12	60.7	9	46.2
Dallas	8	33.3	10	42.1	7	29.5	3	12.7	35	149.3	13	54.8	18	77.1
Davis	1	8.9	2	20.0	4	40.4	—	—	9	92.8	—	—	3	31.3
Decatur	15	112.9	2	15.8	15	119.5	1	8.0	12	97.7	2	16.2	4	32.9
Delaware	1	5.3	10	56.2	8	45.1	3	17.0	11	62.6	4	22.5	13	74.3
Des Moines	5	14.0	24	57.6	56	133.1	9	21.1	10	23.1	4	9.0	17	38.9
Dickinson	3	22.7	2	15.7	8	62.7	—	—	8	62.1	—	—	3	23.2
Dubuque	5	7.5	90	127.3	16	22.4	8	11.1	67	91.7	12	16.0	27	36.6
Emmet	27	194.8	5	35.5	1	7.1	1	7.0	6	42.1	2	13.8	1	7.0
Fayette	15	51.4	1	3.5	12	42.5	9	31.0	17	60.5	14	49.2	12	42.8
Floyd	3	14.4	8	37.4	9	41.9	3	13.8	25	114.6	8	35.9	11	50.1
Franklin	24	146.5	26	159.5	4	24.5	8	49.2	14	86.2	4	24.3	10	61 6
Fremont	11	79.0	1	8.0	4	32.5	2	16.6	11	93.2	—	—	3	25.9
Greene	1	6.0	10	63.8	6	38.4	2	13.0	16	104.5	2	13.0	11	72.3
Grundy	—	—	2	14.6	11	80.4	4	29.1	27	196.1	2	14.3	6	43.5
Guthrie	6	35.0	31	202.4	1	6.5	1	6.7	26	176.3	2	13.5	18	123.6
Hamilton	6	31.4	8	40.6	11	56.0	2	10.2	32	163.2	2	10.1	8	40.8
Hancock	2	12.5	8	52.9	12	79.5	3	20.0	25	166.6	6	39.5	9	60.1
Hardin	3	13.5	26	117.0	15	67.6	5	22.5	19	85.8	6	27.0	14	63.9
Harrison	87	414.0	10	50.6	10	51.2	3	15.7	53	281.3	6	31.9	4	21.6
Henry	2	10.9	4	21.4	16	85.6	1	5.3	4	21.2	1	5.7	11	63.9
Howard	3	21.5	7	53.2	3	22.8	1	7.7	18	138.4	2	15.2	5	38.5
Humboldt	3	21.9	15	114.8	3	23.0	2	15.3	11	84.4	11	83.3	16	123.0
Ida	16	155.0	2	18.6	4	37.3	6	56.3	59	555.7	11	102.3	6	56.7
Iowa	4	23.8	8	50.2	12	75.7	4	25.5	19	122.0	8	51.0	13	84.1
Jackson	—	—	8	42.8	8	42.9	2	10.8	6	32.4	3	16.0	4	21.7
Jasper	11	36.2	10	31.0	9	24.8	8	24.7	54	166.2	9	27.2	33	101.3
Jefferson	4	26.0	—	—	3	19.1	2	12.7	10	63.8	—	—	24	153.0
Johnson	5	14.0	19	42 5	43	94.4	22	46.5	47	96.7	6	14.9	19	47.8
Jones	1	4.8	3	15.4	17	87.6	2	10.3	14	72.6	1	5.5	10	55.5
Keokuk	1	5.6	1	.9	12	71.6	6	36.2	7	42.6	5	30.2	20	122.8
Kossuth	10	36.2	22	83.8	7	26.7	8	30.5	16	61.2	5	18.9	4	15.3
Lee	6	14.6	13	30.3	53	123.2	2	4.6	10	23.0	3	7.0	11	26.0
Linn	11	11.6	26	25.4	158	153.0	13	12.2	50	46.4	13	11.7	63	57.7
Louisa	3	26.7	1	9.1	6	55.1	—	—	5	45.3	1	8.9	6	54.5
Lucas	2	14.1	6	48.9	6	49.7	—	—	5	43.5	—	—	10	88.7
Lyon	12	77.7	7	47.3	3	20.3	—	—	17	116.9	9	61.2	2	13.8
Madison	4	27.2	6	45.2	4	30.4	2	15.4	6	46.8	2	15.5	6	47.3
Mahaska	1	3.6	7	28.2	3	12.1	3	12.3	11	45.3	2	8.2	25	103.7
Marion	7	24.9	3	11.5	6	23.1	3	11.6	9	35.0	5	19.2	31	121.1
Marshall	3	8.1	8	22.5	4	11.2	1	2.8	22	61.7	4	11.2	15	42.7
Mills	30	208.3	5	35.4	5	35.6	7	50.2	19	137.3	—	—	1	8 8
Mitchell	3	21.1	8	57.5	14	100.8	1	7.2	20	143.8	14	99.3	12	86.4
Monona	13	71.1	5	30.4	13	79.8	7	43.6	97	611.3	4	25.1	1	6.4
Monroe	1	7.0	7	58.3	3	25.4	—	—	3	26.8	—	—	4	36.6
Montgomery	8	53.9	1	6.4	5	32.0	—	—	27	172.2	2	12.6	4	25.5
Muscatine	12	36.5	3	9.2	14	42.9	5	15.5	11	34.0	8	24.3	20	61.7
O'Brien	21	104.8	7	36.8	4	21.0	3	15.8	51	269.9	6	31.3	5	26.5
Osceola	18	164.2	10	98.1	1	9.8	—	—	14	138.8	4	39.2	1	10.0
Page	17	70.6	10	41.7	16	67.0	9	37.8	52	219.4	—	—	3	13.8
Palo Alto	5	29.7	15	97.8	8	52.4	1	6.3	10	63.2	—	—	7	44.3
Plymouth	13	56.6	11	47.2	1	4.3	3	12.9	80	344.9	5	21.3	10	43.1
Pocahontas	6	35.8	12	77.3	9	58.2	1	6.5	11	71.8	4	25.8	5	32.8
Polk	108	50.2	120	53.8	110	48.9	39	17.0	436	187.3	71	29.7	256	108.6
Pottawattamie	82	127.7	27	39.0	29	41.8	8	11.4	138	196.2	7	9.8	20	28.3
Poweshiek	3	15.9	13	67.6	1	5.1	7	36.1	13	66.7	7	35.3	7	35.8
Ringgold	6	57.3	3	31.1	1	10.5	—	—	4	43.6	—	—	2	22.2
Sac	22	124.7	17	98.1	18	104.0	1	5.7	95	543.1	10	56.3	21	120.1
Scott	40	44.0	10	10.1	32	32.2	11	10.7	55	52.7	17	15.9	62	58.9
Shelby	30	183.1	11	68.9	15	94.3	3	18.9	25	158.6	2	12.6	7	44.6
Sioux	34	123.4	10	38.2	4	15.3	2	7.6	43	164.2	2	7.5	2	7.7
Story	26	73.6	28	65.2	53	121.3	11	24.1	40	85.6	17	43.4	48	124.4
Tama	7	30.7	4	18.4	12	55.4	5	23.2	25	116.2	2	9.3	5	23.6
Taylor	5	36.3	7	55.7	2	16.1	3	24.6	13	108.3	—	—	2	16.9

* Case Rates per 100,000 Estimated Population July 1 of each Calendar Year.

County	1948 Cases	1948 Rate	1949 Cases	1949 Rate	1950 Cases	1950 Rate	1951 Cases	1951 Rate	1952 Cases	1952 Rate	1953 Cases	1953 Rate	1954 Cases	1954 Rate
Union	3	19.5	4	25.8	4	25.9	5	32.1	11	70.9	1	6.4	1	6.5
Van Buren	5	43.1	1	9.0	38	345.9	—	—	2	18.6	—	—	5	46.8
Wapello	2	4.2	7	15.0	12	25.6	15	31.4	13	27.0	6	12.2	42	86.8
Warren	9	50.8	7	39.4	6	33.8	6	33.8	26	146.3	7	38.8	19	106.8
Washington	3	14.8	4	20.4	18	92.2	5	25.6	30	154.3	3	15.2	22	113.4
Wayne	4	30.9	11	92.9	16	136.6	3	26.0	11	96.6	3	26.3	8	71.2
Webster	24	56.5	25	56.9	10	22.6	4	9.0	42	93.6	20	43.7	27	59.8
Winnebago	5	34.1	10	74.1	1	7.4	8	59.8	10	75.0	5	37.1	2	15.1
Winneshiek	13	57.0	12	55.3	44	203.3	1	4.6	32	148.8	6	27.6	7	32.6
Woodbury	47	44.6	30	28.8	26	25.0	25	24.0	379	364.5	36	34.1	35	33.6
Worth	6	51.3	19	171.7	1	9.0	—	—	11	100 2	—	—	2	18.3
Wright	20	100.5	12	61.0	13	66.2	6	30.6	33	168.7	6	30.3	13	66.5
Total	1236	47.6	1217	46.7	1399	53.6	465	17.7	3564	135.0	613	23.1	1445	55.4
Deaths per year	(81)—1948		(90)—1949		(65)—1950		(22)—1951		(163)—1952		(27)—1953		(57**)—1954	

** Through November only

1954 POLIOMYELITIS CASES AND DEATHS BY AGES & SEX

Age Group	Cases MALE	Cases FEMALE	Deaths MALE	Deaths FEMALE
Less than 1 year	23	15	1	0
1- 4 inclusive	154	101	1	1
5- 9 "	244	129	6	4
10-14 "	142	84	7	1
15-19 "	68	67	1	3
20-24 "	46	66	2	5
25-29 "	56	69	9	0
30-34 "	35	38	3	4
34-39 "	26	25	1	2
40-44 "	7	13	2	0
45-49 "	5	3	0	1
50-54 "	1	2	0	2
55-59 "	3	3	0	1
60 plus	0	1	0	0
Unknown	12	7	0	0
Total	822	623	33*	24*

* December deaths not available.

MORBIDITY REPORT

Disease	Jan. 1955	Dec. 1954	Jan. 1954	Most cases reported from these counties:
Diphtheria	3	3	3	Webster 2, Cerro Gordo 1
Scarlet Fever	70	55	237	Black Hawk, Buena Vista, Polk
Typhoid Fever	0	1	0	.....
Smallpox	0	0	0	.....
Measles	723	249	1037	Allamakee, Linn, Scott
Whooping Cough	102	51	23	Black Hawk, Polk, Scott
Brucellosis	8	14	18	Montgomery 2, others scattered 1 to a county
Chickenpox	509	398	989	Black Hawk, Linn, Polk, Scott
Meningococcus Meningitis	2	1	4	Allamakee 1, Polk 1
Mumps	638	519	363	Black Hawk, Cerro Gordo, Dubuque, Polk
Poliomyelitis	9	23	1	Sac 3, other scattered 1 to a county
Rabies in Animals	24	21	12	Cedar 2, Humboldt 2, Polk 2, Woodbury 2, others scattered 1 to a county
Infectious Hepatitis	170	120	264	Black Hawk, Linn, Winneshiek
Rocky Mt. Spotted Fever	1	0	0	Des Moines
Tularemia	3	1	0	Jefferson 2, Iowa 1
Tuberculosis	53	32	37	For the State
Gonorrhea	76	59	66	For the State
Syphilis	133	88	159	For the State

TOTAL POLIOMYELITIS CASES FOR YEARS 1952, 1953 & 1954 BY MONTHS

Months	1952	1953	1954	
January	1	7	1	
February	3	5	9	
March	2	2	4	
April	4	4	7	
May	6	14	6	
June	47	21	26	
July	340	59	225	
August	1260	248	337	
September	1034	123	457	
October	664	69	270	
November	168	39	80	
December	35	22	23	
Total Cases	3564	613	1445	
Total Deaths	163	27	57	(through Nov. only)

SUI PSYCHIATRISTS TEST SEDATIVE

Psychiatrists at the SUI College of Medicine are participating in tests on chlorpromazine, a new drug being used in the treatment of patients with mental or emotional disturbances.

Dr. P. E. Huston, assistant director of the University's Psychopathic Hospital, warns that the drug is not a cure for mental disease. "But," he says, "studies have indicated that chlorpromazine can be a great help in reducing or eliminating the excitability and restlessness which accompany some medical problems."

Persons suffering from tension or long periods of anxiety, elderly people whom hardening of the arteries has agitated, and manic-depressives in their over-active phase, it seems, can be calmed satisfactorily. "In mild attacks," Dr. Huston reported, "the drug sometimes even eliminates the need for hospitalization."

* Chlorpromazine is the generic name for the chlorinated phenothiazine compound developed in the Rhone-Poulenc research laboratories of France and placed on the American market by Smith, Kline and French under the trade name Thorazine. Though the AMA Council on Pharmacy and Chemistry has not as yet undertaken an evaluation of the drug and can be expected to report upon it only in the rather distant future, it has been discussed in the following issues of J.A.M.A.: Oct. 3, 1953 (p. 480); May 1, 1953 (p. 18); June 12, 1954 (p. 626); and Jan. 22, 1955 (p. 309). Complications incident to its use have been discussed in the Nov. 27, 1954 (p. 1249) and Jan. 22, 1955 (pp. 321 and 364) issues of J.A.M.A., and the author of the article on "Mental Illness" in this issue of J. IOWA M. SOC. advises against its use on the grounds that it is mere symptomatic therapy.

WOMAN'S AUXILIARY NEWS

Mrs. Keith M. Chapler, *Publications Chairman*, Dexter, Iowa
President—Mrs. Lester R. Hegg, Rock Valley
President-Elect—Mrs. Charles H. Flynn, 709 W. 15th Street, Clarinda
Secretary—Mrs. Robert P. Mason, 5818 Chamberlain Drive, Des Moines 12
Treasurer—Mrs. Howard H. Smead, 3333 Grand Avenue, Des Moines 12

LINES FROM THE PRESIDENT

The committee in charge of the program for the State Auxiliary's annual meeting, at the Hotel Savery, in Des Moines, April 25-27, has been working diligently. Many new features have been added, and the sessions promise to be interesting ones for all doctors' wives. Members are asked to show their appreciation of the committee's efforts by sendiing reservations early and by following the schedule closely.

A special program has been planned for all Future Nurses clubs which are sponsored by the Auxiliaries throughout the state. Future Nurses clubs can contribute untold strength to their communities and to their nation by promoting interest in nursing education. We welcome the new Future Nurses clubs at Clarinda and Creston, and we wish them and their sponsoring Auxiliaries great success.

TODAY'S HEALTH sales have reached new heights this year in Iowa. A letter from the national chairman for that project informs us that our State Auxiliary was one-fourth credit ahead of all of last year's sales by December 7. Our state chairman, Mrs. R. H. Moe, of Griswold, has done much to make that record possible.

Councilors and members in some of our eleven councilor districts have reason to hope that 100 per cent of their counties will have been organized before the state meeting is held this year. If they are successful, we shall have increased our membership very considerably and shall be able to make a fine report to the national Auxiliary. Growth and progress are the result of unified action on the part of officers, committees and individual members. Let us always remember the slogan: "A Bigger and Better Auxiliary for Iowa."

Achievement Award sheets must be sent to Mrs. V. W. Peterson, 1324 Pershing Boulevard, Clinton, by April 15. Remember that no matter how small your chapter may be, it still has a chance. Small counties are not in competition with large ones.

Has your exhibit chairman been appointed? Check the yearbook for details pertaining to rules of the Exhibit Contest.

March 30 is Doctors' Day! Let us remember to honor our doctor husbands with a red carnation.

Mrs. Lester R. Hegg
President

DOCTORS' DAY

On Doctors' Day, the members of the medical profession, both living and dead, are honored. The idea of setting aside a day of recognition for them originated with Mrs. G. B. Almond, of Winder, Georgia, who proposed that March 30 be chosen for the observation, because it was on that day, in 1842, that her fellow Georgian, Dr. Crawford Long, initiated the technique of anesthesia, thereby making what many people believe was among the World's ten greatest advances in medicine. Since Dr. Long's contribution is a symbol of the consideration which all doctors have for their patients and of the concern that all of them have for the relief of pain, Mrs. Almond's choice was particularly appropriate.

The commemoration and day of honor dedicated to all doctors was first proposed to the Woman's Auxiliary of the AMA in 1934. It was enthusiastically adopted, and today the occasion is observed by almost every state Auxiliary in the nation.

The red carnation has been adopted as the emblem of Doctors' Day, sprays of flowers are laid on the graves of deceased physicians, and greeting cards are sent by the Auxiliaries to the physicians practicing in their areas.

EXECUTIVE BOARD MEETING

The Executive Board of the State Auxiliary met in the office building of the State Medical Society at 10:00 a.m., January 20, 1955, with 27 members present. Mrs. Lester R. Hegg, the president, presided.

The balance in the treasury was reported as having been $2,345.88, on January 1, 1955.

Reports of councilors were heard, and afterward, Mrs. Dean H. King, first vice-president and organization chairman, stated that 32 members have been added to the roll during the past year,

making a total of 912. She reminded her audience that there are 2,140 doctors in the state, almost all of whom have wives. Wright and Cerro Gordo counties have been organized, she said, and four other counties have set dates for organization meetings.

Regarding publications, Mrs. K. M. Chapler announced that it may be possible in the future to enliven the WOMAN'S AUXILIARY NEWS with some art work and, occasionally, with some color. Two pages, she said, are the usual allotment in THE JOURNAL, though more will be granted on occasion, if necessary. Items sent for publication in the NEWS should be condensed as much as possible, and care should be taken that two or more reports do not, wholly or in part, relate the same news or express identical ideas. As a space-saving measure, by-lines will be omitted in most instances.

According to Mrs. F. B. Leffert, Iowa is lagging ignominiously as regards subscriptions to the BULLETIN. She said she wrote letters to all of the county presidents regarding subscriptions, but got replies from only four. Mrs. R. H. Moe, TODAY'S HEALTH chairman, has succeeded in building up 519½ credits in the contest for subscriptions to the magazine which is her chief concern.

The Nurse Recruitment and Loan Fund, Mrs. W. H. Longworth reported, has a balance on hand of $1,204.99. Letters have been mailed to all organized counties, and responses have been received from all but seven. Money has been received from all but ten counties. Disbursements have been made to five girls for tuition, and to one girl for uniforms. Most of the large Auxiliaries, Mrs. Longworth said, have given more than 50 cents per capita, and one chapter with only 11 members has given $50.

With the assistance of Mrs. King, Mrs. E. A. Larsen, chairman of Nurse Recruitment and Loan Fund, explained a plan by which all explanatory materials on nursing as a career might be mailed from the offices of the Iowa State Medical Society. With part-time help, Mrs. Hazel Lammey, the State Auxiliary's secretary, could take care of this work. Since nurse recruitment has been an important part of the Auxiliary's program for many years, it is vital that authentic material be distributed from a professional source. The proposal was accepted by the Board, with the understanding that other interested organizations would cooperate financially.

Mrs. H. C. Merillat, chairman of Work for the Handicapped, stated that three sales of handicrafts are scheduled for the near future. A total of $3,599 was realized last year. The Committee is helping to allot and to divide materials for the sales.

Mrs. B. F. Kilgore, chairman, and Mrs. J. F. Gerken reported jointly on plans for the annual meeting, and read a tentative program.

Dr. F. C. Coleman, chairman of the Iowa State Medical Society's Committee on Legislation, explained the expanded Hill-Burton Hospital Construction Act. The new law offers money to the states for the construction of chronic-illness hospitals, rehabilitation centers, nursing homes and diagnostic and treatment centers. All of them must be non-profit institutions, and, according to an interpretation that the HEW Department has made, a state won't be permitted funds for any of those types of facilities unless it agrees to appropriate matching amounts for the construction of all of them. No one is certain just what the authors of the federal law meant when they spoke of "diagnostic and treatment centers."

Mrs. W. A. Seidler, chairman of Revisions, gave a second reading of the proposed Constitution and By-Laws, with recommended changes.

Following luncheon, Dean Kitchell, of the SUI School of Nursing, gave a detailed address on "Trends in Nursing" which will be reported in a later issue of the WOMAN'S AUXILIARY NEWS.

COUNTY AUXILIARY HIGHLIGHTS, 1954

Annual reports of state and county officers will be mimeographed and distributed at the annual meeting, but a few county chapters have submitted their reports to the Publications Chairman, and the principal points which they contain are digested in the items to follow.

On the whole, county auxiliaries have loyally supported recommended projects, such as obtaining subscriptions to TODAY'S HEALTH and making contributions to the A.M.E.F. Programs have been varied and interesting. Mrs. Hegg and the other state officers have been guests and speakers at numerous county and district meetings. Dinners with doctors, picnics, parties, coffees and teas have featured the social programs. Some county medical societies make it a point to entertain the wives of members once or twice each year.

BLACK HAWK County Auxiliary had a miscellaneous program, sponsored Future Nurses clubs, and held a most successful sale for the handicapped. Mrs. R. F. Nielsen concludes her report with the words: "Personally, I shall remember much longer the fun we had, than the good deeds we have done. We have gained friendship and understanding, which have made our Auxiliary the best possible investment of time and energy. If there is tension or strife between doctors' wives in a community, membership in an Auxiliary is the right prescription. Everyone fears and suspects the thing which she does not understand. Out of understanding comes love. Don't take our word for this. Try it and see if we aren't right!"

BOONE County Auxiliary has 14 very active members and has rekindled the interest of doctors' widows in the area. The outstanding program of the year was an observance of National Nurse Week. Guests entertained at the Boone Golf and Country Club numbered 80, and the program was

given by four Future Nurses club members, three of whom are in training at Des Moines hospitals; the fourth is a laboratory technician at the Boone County Hospital.

During the two years which the Boone County Auxiliary has been sponsoring Future Nurses clubs, 30 girls have entered training and 5 have gone to laboratory technology schools. One of the girls has taken advantage of the State Auxiliary's loan fund, and one has had a P.E.O. loan. The Future Nurses Club at Boone High School has a membership of 43.

DES MOINES County Auxiliary has a membership of 36. It sponsors two Future Nurses clubs in Burlington high schools, gives to each of the clubs a subscription to TODAY'S HEALTH, and gives to each of the girls a pin, with the numerals of her graduation year attached. The Des Moines County chapter held a sale for the handicapped, for the first time in 1954, and netted $408.

Mrs. John Foss comments in regard to the relationship between the Auxiliary and the medical profession. "Our Auxiliary members are very willing, but *some* members of the Medical Society disapprove of our organization just a little bit. Right now, we are passing through the stage of being silently ignored. But, little by little, our activities are being noticed. The majority of Medical Society members are aware, now, of both our efforts and our potentialities. Given a few more years, I think, we shall have achieved cooperation."

DUBUQUE County Auxiliary has an annual Mardi Gras ball to raise money for nurse scholarships. The Auxiliary has a girl in each of the two Dubuque training schools. New officers are: Mrs. J. J. Straub, president; Mrs. Charles Schuelber, vice-president; Mrs. Mansfield Logan, secretary; and Mrs. Edwin Thorensen, treasurer.

GRUNDY County Auxiliary sponsors a Future Nurses club in the Grundy Center High School, and has donated money to assist in buying a phonograph for the School for the Mentally Retarded. It gave a Valentine party for the children at that institution.

HAMILTON County Auxiliary has 11 members. The Future Nurses club at the Webster City High School has been expanded to allow girls from elsewhere in the county to become members. Participation by junior high school girls is encouraged. Gift subscriptions to TODAY'S HEALTH have been presented to the hospital library, to Lincoln High School and to Washington Junior High School. Every M.D. in the county subscribes to TODAY'S HEALTH, and an effort has been made to promote subscriptions among dentists.

MARSHALL County Auxiliary has 28 members. It promotes nurse recruitment, and has donated $15 to the Nurses Loan Fund. Members are active in hospital auxiliary work. Some have assisted at the new School for Mentally Retarded Children, and the Auxiliary has purchased numerous items of various sorts for the School.

MONONA County Auxiliary has been organized only one year. Luncheon meetings have promoted better acquaintance, and have given members an opportunity to learn about Auxiliary aims and projects.

PLYMOUTH County Auxiliary was organized in January, 1954. In May, it held a tea for 50 girls who had joined newly organized Future Nurses clubs. New officers in Plymouth County are: Mrs. M. D. Hayden, president; and Mrs. S. Tindell, secretary-treasurer.

POTTAWATTAMIE County Auxiliary has a fall rummage sale, receipts from which finance gifts to Mercy and Jennie Edmundson hospitals. A Christmas fund benefits a needy family at holiday time. New officers are: Mrs. U. J. Collignon, president; Mrs. James Mahoney, vice-president; Mrs. F. E. Marsh, Jr., secretary; and Mrs. Lee Martin, treasurer.

WEBSTER County Auxiliary sponsored the Craft and Hobby Show in May, for the benefit of the handicapped. The Future Nurses club which was organized in Fort Dodge several years ago is growing steadily. The Auxiliary's new officers are: Mrs. P. L. Stitt, president; Mrs. Dan Egbert, vice-president; and Mrs. C. H. Coughlan, secretary-treasurer. A contribution of $50 was made to the A.M.E.F.

WOODBURY County Auxiliary has 95 members, who provide a $500 scholarship at St. Vincent's Hospital, Sioux City, for a student nurse who formerly was a member of the Future Nurses Club at Central High School. In addition, $50 is provided a student nurse at Iowa City who formerly was a member of the Club at East High School.

The Auxiliary's sale for the handicapped netted $1,057.45. The Christmas offering of $47 was used for gifts to patients at the River Heights T-B Sanitarium, in Sioux City.

POLK COUNTY MEETING

A luncheon meeting of the Polk County Auxiliary was held in the Garden Room in the Hotel Kirkwood, Des Moines, on January 10. Dr. Walter D. Abbott spoke to the group on questions involved in the Attorney General's opinion regarding radiology and pathology work in Iowa hospitals. Discussion followed Dr. Abbott's informative talk.

NECROLOGY NOTICE

The names of Auxiliary members who have died during the past year should be sent to Mrs. A. G. Felter, of Van Meter, on or before April 1, if they are to be included in the Memorial at the annual meeting. Facts regarding the activities and interests of the deceased should be included, so that they may be entered in the historian's book.

NEW ANTIBIOTIC SHOWS GREAT PROMISE

Discovery of a new antibiotic which has produced "impressive" improvement in severe pulmonary tuberculosis and "good" results in stubborn infections of the genito-urinary tract was disclosed by Dr. Israel Epstein, of New York Medical College, in a paper which he read on February 9 at the 14th Veterans Administration-Army-Navy Conference on Tuberculosis, in Atlanta. The paper, reflecting research by Drs. K. G. S. Nair and Linn J. Boyd, as well as Dr. Epstein, appears in the February issue of ANTIBIOTIC MEDICINE.

EFFECTIVE AGAINST TUBERCULOSIS

The new antibiotic, Seromycin (cycloserine), was developed in the laboratories of the Commercial Solvents Corporation, at Terre Haute, Indiana, and the clinical research on it was conducted jointly by that firm and Eli Lilly and Company, of Indianapolis. Lilly will market it.

When administered to 37 severely ill pulmonary tuberculosis patients over a three or four months' period, Dr. Epstein reports that Seromycin produced clinical improvement in 36 cases (i.e., the patients looked and felt better); caused roentgenologically proved improvement in the infected lung areas of 28 patients; contributed to a weight gain of from 4 to 14 pounds during 16 weeks in 30 patients; reduced fever in all patients who had been febrile; and caused simple smears of sputum and gastric concentrates from 30 patients to test negative.

Of the 37 patients, 29 had been judged "chronic, far advanced, but active pulmonary cases" and had failed to respond to intensive antimicrobial therapy during a year or more. Five were so seriously ill that doctors continued long-standing treatment with dihydrostreptomycin and isoniazid after starting Seromycin, 1.0-1.5 Gm. daily. A comparison with similar cases receiving Seromycin alone showed no apparent advantage in combining the three antibiotics, the clinicians said.

The other 8 patients had severe tuberculosis of recent origin. They previously had received no antimicrobial drugs. Each showed improvement in all five categories of evaluation. Toxicity necessitated the discontinuance of the drug in 4 of the 37 cases.

ALSO COMBATS GENITO-URINARY INFECTION

The tuberculosis conference also was told that Seromycin is "a practical urinary antiseptic in ambulatory cases and especially effective in stubborn infections of the genito-urinary tract." That evaluation was expressed in a paper read by Dr. Henry Welch, of the Food and Drug Administration.

A total of 71 patients with genito-urinary troubles had been treated with the new drug by Drs. George R. Nagamatsu and Lois Lillick, of the New York Medical College, and Dr. Russell D. Herrold, of the University of Illinois College of Medicine. Dr. Welch said that in 46 of the 62 stubborn infections of the G-U tract, good results were obtained, though other treatment had been ineffective, and that in 36 of the cases which responded favorably, the infecting organisms were cleared from the urinary tract.

LAY EXECUTIVES REMAIN CAUTIOUS

Despite the claims that were made for their discovery by the physicians who spoke at Atlanta, the presidents of Commercial Solvents Corporation and Eli Lilly and Company warned against overoptimism. They said that months of further clinical study is necessary before the drug's effectiveness can be satisfactorily evaluated. On previous occasions, they pointed out, remarkable results produced by new pharmaceuticals have led to premature announcements that they were "cures" for this disease entity or that.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa
Thursday at 11:15 a.m.

"THE STORY BEHIND THE DISCOVERY"

March 3 ..... Your Life's Blood
March 10 ..... The Sheep at Melun
March 17 ..... The Invisible Enemy
March 24 ..... The Cat and the Mouse
March 31 ..... Almost Human

WSUI—Iowa City, Iowa
Tuesday at 11:45 a.m.

"PHYSICAL MEDICINE"

March 1 ..... Infantile Paralysis
March 8 ..... Massage
March 15 ..... Exercise
March 22 ..... Local Applications of Heat and Diathermy
March 29 ..... Sunlight—Real and Artificial

TELEVISION

KGLO-TV—Mason City, Iowa
Sunday at 5:30 p.m.

March 13 ..... Stuttering
March 27 ..... Pregnancy

Television broadcasts over the Ames station are scheduled to resume in April.

As regards what may have seemed inexcusable errors in our past announcements of radio programs, the JOURNAL *wishes to explain that stations frequently cancel or postpone medical programs to make room for current-events broadcasts and neglect to inform the State Medical Society until the whole series has been completed.—Editor.*

COUNTY SOCIETIES

Black Hawk

On Tuesday, February 12, at the Elks Club in Waterloo, the Black Hawk County Medical Society heard Dr. Eugene Van Epps, of SUI discuss "Gastrointestinal Abnormalities in the Neonatal Period Demonstrable by X-ray." At the meeting on Tuesday, March 15, the speaker is to be Dr. Arkell M. Vaughan, of Chicago.

Boone

At an election held on January 14, Dr. G. H. Sutton was chosen president of the Boone County Medical Society. Dr. A. W. Puntenney was elected vice-president; Dr. F. N. Johnson, secretary-treasurer; Dr. R. L. Wicks, delegate; and Dr. Johnson, alternate delegate.

Cerro Gordo

Dr. Gordon B. Kamman, of St. Paul, addressed the Cerro Gordo County Medical Society, at Mason City on January 11, on "Psychometrics in General Practice." About 50 doctors were present.

Clinton

On January 18, Dr. Leander Riba, professor of urology at the Northwestern University medical school addressed the Clinton County Medical Society on "Renal Stones." Officers for 1955 elected at that meeting include Dr. J. E. O'Donnell, president, Dr. Maryelda Rockwell, vice-president, and Dr. Richard Emmons, secretary.

Des Moines

Dr. Robert Moerke was re-elected president and Dr. Donal Petersen treasurer of the Des Moines County Medical Society for 1955. Dr. Robert Bell was named vice-president; Dr. Raymond Vercio, secretary; Drs. Frank Ober and E. P. Russell, delegates; and Drs. Jesse Saar and John Foss, alternates.

Dubuque

On February 8, at the Bunker Hill Country Club, Dr. Henry Suckle, of Madison, Wisconsin, addressed the Dubuque County Medical Society on the subject "Treatment of Head Injuries." The March 8 meeting, to be held at the same place, will feature an address by Mr. George E. Hall, of the AMA legal staff, entitled "Let's Understand Each Other." The Dubuque meetings usually start at about 7:30, and visiting physicians are welcome.

Harrison

Dr. Bernard Kenney, of Woodbine, was elected president, and Dr. F. X. Tamisiea, of Missouri Valley, was re-elected secretary of the Harrison County Medical Society at a meeting held in January. Dr. A. C. Bergstrom, of Missouri Valley, was named delegate to the Iowa State Medical Society.

Johnson

Drs. E. S. Brintnall, D. C. Funk, O. R. Hyndman and Walter Kirkendall presented a symposium on "Aorto-iliac Thrombosis (Lariche Syndrome)" at the February 2 meeting of the Johnson County Medical Society.

Linn

At the March 10 meeting of the Linn County Medical Society, at Cedar Rapids, Dr. Herbert E. Schmitz, of Chicago, will discuss "Present-day Trends in the Treatment of Carcinoma of the Cervix."

Polk

At the January 19 meeting of the Polk County Medical Society, at the Des Moines Golf and Country Club, Dr. Walter Abbott was named president-elect, and Dr. V. I. Sciscent, of Waterloo, Dr. George Scanlon and Dr. Eugene Van Epps, of Iowa City, and Dr. W. M. Sproul, Mr. I. W. Meyers, and Mr. W. H. Sherin, of Des Moines, composed a panel that discussed various phases of the physician-hospital controversy. At the meeting on February 16, Dr. J. E. Kelsey, a member of the staff at the Des Moines V-A Hospital, discussed "Kaiser-Permanente Operations."

Geoffrey T. Mann, LL.B., M.D., of Richmond, Virginia, is to speak on "The Medical Examiner Committee" at the March 16 meeting, which will be held at 6:30 p. m., at the Savery Hotel, in Des Moines. Members of the Iowa General Assembly will be guests of the Society, and physicians from outside Polk County are encouraged to attend.

Pottawattamie

At the January 18 meeting of the Pottawattamie County Medical Socity, Mr. Wm. J. Hotz, Jr., an

Omaha attorney, explained recent changes in the federal income tax law as they affect returns made by physicians, and a representative of Blue Shield answered questions on medical insurance. It was announced that the Iowa-Nebraska Clinical Assembly, at Council Bluffs on March 24, will be concerned with thyroid diseases.

Wapello

The annual business meeting and election of officers will take place at the April 5 meeting of the Wapello County Medical Society.

Woodbury

At the January 27 meeting of the Woodbury County Medical Society, Mr. W. H. Sherin, executive director of Iowa Medical Service, was the speaker.

MENTAL ILLNESS

ANXIETY STATES

Of all psychiatric conditions, anxiety states are not only the most frequently encountered, but also are the most easily understood by individuals who are not themselves subject to the condition. All people, from time to time, experience anxiety as the result of an external threat to their safety or to their welfare. When a person is crossing a street and observes a car bearing down on him, he has a justifiable anxiety, one which may serve the useful purpose of stimulating him to dive for the opposite curb. At a different emotional level, let us take the individual who feels anxious when he undertakes to make a speech before a group of his fellows. In this instance there is no threat to his life, but rather to his security against disapproval. Any reader will be able to add innumerable instances of externally-induced anxiety from his own background and experience.

Psychoneurotic anxiety states, which are the subject of this discussion, differ from the above in that they occur, not in response to an external threat, but in response to internal emotional conflict. A man may be sitting quietly in his chair at home, reading the evening paper, when suddenly he experiences cardiac palpitation, shortness of breath, sweating, choking, or any of the other well-known symptoms of anxiety.

This type of anxiety—the anxiety state—is, then, no longer a normal response to an external stimulus leading to a useful reaction, but is a pathologic reaction in response to internal conflict, leading only to discomfort and perhaps to incapacitation. In short, it is now an illness, and an illness more frequently encountered in medical practice than any physical disease except, perhaps, the "common cold."

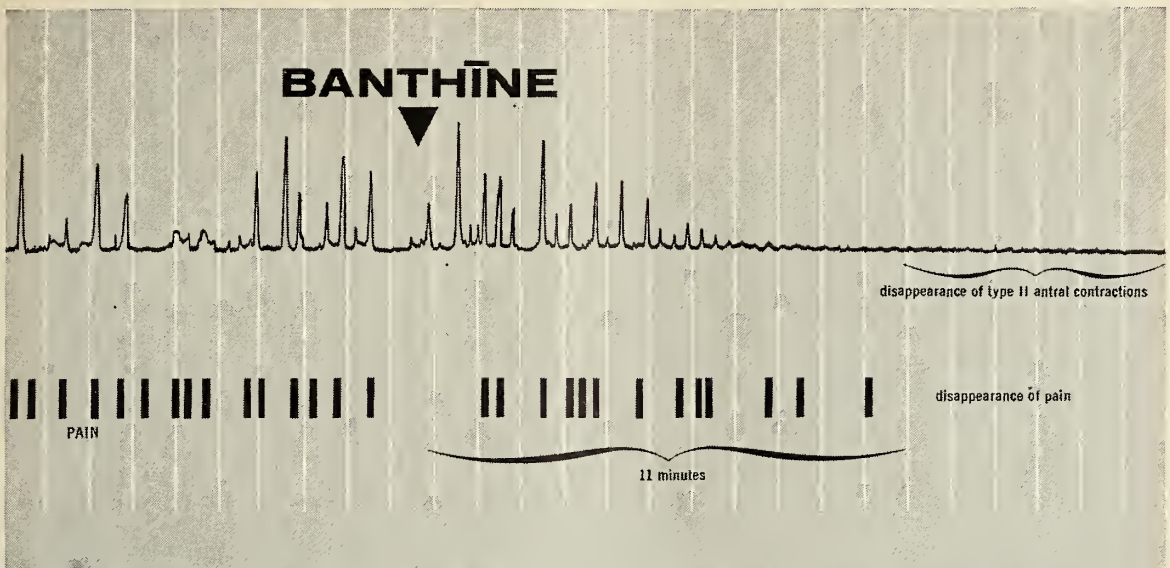
The roots of an anxiety state always lie in that area of the mind which is not immediately accessible to recall, the part of the mind usually called the unconscious. The life-experiences of psychoneurotics are as varied as the patterns of snowflakes, yet there is one common denominator: each psychoneurotic has been reared in an environment which is, for him, insecure, and as a result of this insecurity he has come to feel, deep within himself, that the world is a dangerous and hostile place. He is not consciously aware of this situation until some environmental factor in childhood, adolescence or adulthood impinges upon the unconscious conflicts and causes the emotions with which they are laden to discharge into consciousness in the form of anxiety.

It is obvious that because anxiety states arise from emotional conflict, the only rational method of treatment is a psychological approach which will permit the patient to understand, and thus to control, his emotional reactions without converting them into overt tension. Because there are usually physical symptoms as repercussions of the emotional turmoil, the psychoneurotic, initially, should have one thorough physical examination, with whatever concomitant laboratory tests may be indicated. The patient should then be told quite frankly the nature of his condition, with the explanation that it is of psychic origin. Use of the term "nerves" or "nervousness" should be avoided, for those words convey an ambiguous idea to many people, in part as a result of the advertising of cultists. After the initial physical examination, no further physical procedures should be performed, lest the patient be thereby made to suspect that the physician has lost faith in his own diagnosis.

From Freud's studies, early in his career, with cocaine, down to present-day experiments with chlorpromazine and rauwolfia serpentina, a search has been made for a drug which will "cure" psychoneurosis. Yet it is apparent from the nature of psychoneurosis that no form of medication can touch the roots of the condition, that at best a drug can provide only temporary relief of symptoms, and that at worst it can cause marked dependence upon, and habituation to, sedation.

Therefore, if the physician is to offer to his psychoneurotic patient the greatest possible service, he must avoid the use of medication, must avoid repeated fruitless physical examinations, must explain the psychological nature of the condition, and must offer the patient the opportunity to work out with him the emotional conflicts which led to the illness. If the patient will cooperate in this form of treatment, the prognosis is excellent. Psychotherapy is a time-consuming procedure, but one which is emotionally rewarding to both patient and physician, and it is the only form of treatment of any value in psychoneurosis.

BANTHĪNE® IN PEPTIC ULCER



Effect of 100 mg. of Banthine administered orally on antral gastric motility and duodenal ulcer pain.

Hightower, N. C., Jr., and Gambill, E. E.: Gastroenterology 23:244 (Feb.) 1953.

Hypermotility and Hyperacidity

A recent evaluation of anticholinergic therapy in peptic ulcer emphasizes the fact that now the profession has at its disposal agents that are "effective in reducing both secretory and motor activity of the stomach."

The effect on motor activity is generally more pronounced and less variable than on secretion; pain relief is usually prompt; a high degree of effectiveness is noted in ambulatory ulcer patients.

Ruffin, J. M.; Texter, E. C., Jr.; Carter, D. D., and Baylin, G. J.: J.A.M.A. 153:1159 (Nov. 28) 1953.

With its proved anticholinergic effectiveness, Banthine has been found extremely useful in the medical management of active peptic ulcer, whether duodenal, gastric or marginal.

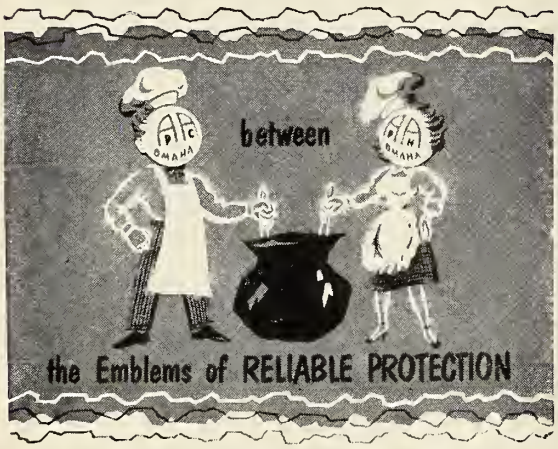
The immediate increase in subjective well-being and the simplicity of the Banthine regimen assures patient cooperation. The recommended initial therapeutic dose is 50 or 100 mg. (one or two tablets) every six hours around the clock, with subsequent individual adjustment. The usual measures of diet regulation, rest and relaxation should be followed.

Banthine is effective in other conditions caused by excess parasympathetic stimulation. These include hypertrophic gastritis, acute and chronic pancreatitis, biliary dyskinesia and hyperhidrosis. Banthine is contraindicated in the presence of glaucoma and should be used with caution in the presence of severe cardiac disease or prostatic hypertrophy.

Banthine bromide (brand of methantheline bromide) is supplied in scored tablets of 50 mg. and in ampuls of 50 mg. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

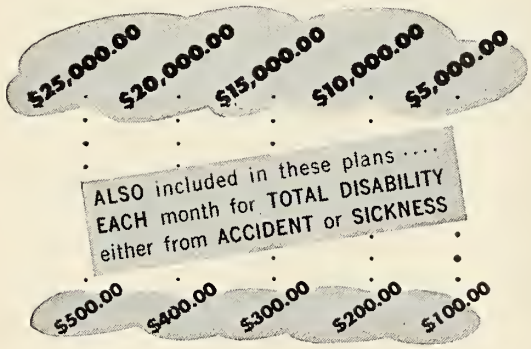
SEARLE

Something NEW is Cooking



MORE INSURANCE NOW AVAILABLE

think! HOW THESE AMOUNTS WOULD HELP IN PAYING ESTATE TAXES IN CASE YOU ARE ACCIDENTALLY KILLED . . .



SPECIFIC BENEFITS ALSO FOR LOSS OF SIGHT, LIMB OR LIMBS FROM ACCIDENTAL INJURY
HOSPITAL INSURANCE also for our members and their families

$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

The Month in Washington

Washington, D. C.—A bill that is not a part of the official Eisenhower health program is causing a stir in Congress.

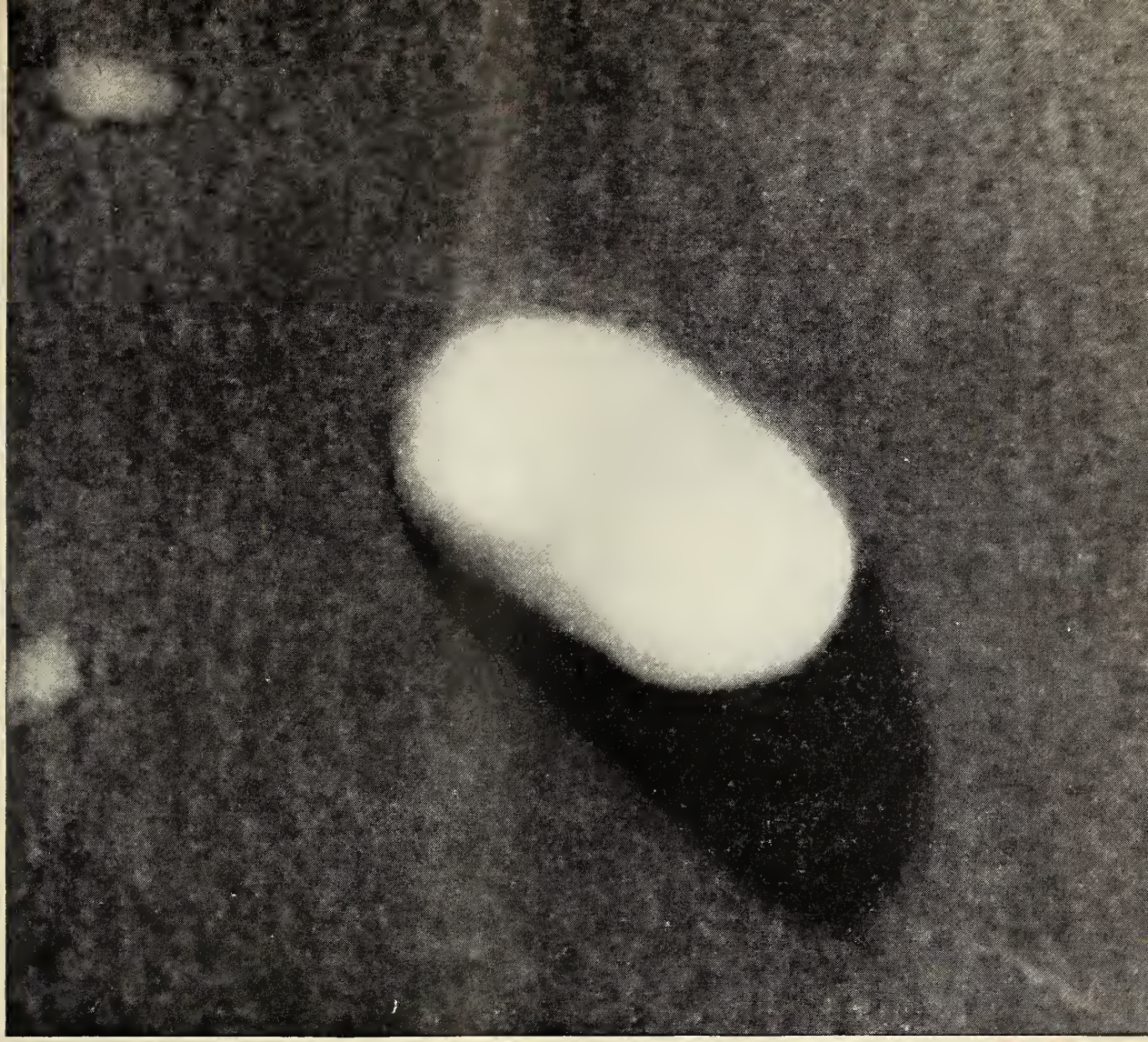
The bi-partisan measure would provide $90 million to be spent over three years to help construct and equip non-federal medical research and laboratory facilities. Often in the past five year, efforts have been made to get Congress to set up various huge new research programs pointed at a single disease and calling for direct federal operation of the project. Without exception they have been turned down because Congress decided that the existing National Institutes of Health were the proper vehicles for such all-federal research.

The bill in which Congress is now interested takes a different approach. It would have the federal government "get in and get out"—a system used successfully in the Hill-Burton hospital construction program. Grants would go to non-profit hospitals, medical schools, medical laboratories and like institutions, and the institution itself would have to match the federal money. Once the particular construction had been completed and equipped, the federal government would relinquish all control or influence over the project, as under Hill-Burton. Unlike the Hill-Burton plan, the grants would go directly from the U. S. to the project.

The Senate sponsors of this bill carry more than ordinary weight within their own parties. They are Senator Lister C. Hill (D., Ala.), who not only is chairman of the Labor and Public Welfare Committee, but also heads the subcommittee that passes on most health appropriations, and Senator Styles Bridges (R., N.H.), who has added prestige as chairman of the Senate Republican Policy Committee. The House sponsor is Rep. Percy Priest (D., Tenn.), chairman of the Interstate and Foreign Commerce Committee, which, like Senator Hill's committee, is in charge of most health bills.

Introduction of specific bills to implement the President's own health program disclosed a few more details of what he wants from Congress, but generally the suggestions are the same Mr. Eisenhower offered in his State of the Union Message, his Health Message and other earlier statements.

The reinsurance bill, again the center of controversy, is much the same as last year's bill, but singles out certain areas where the administration believes reinsurance would be particularly helpful. They are the coverage of rural families, greater protection for low-income families (including home and office calls), and the insurance of major medical costs. The new bill also makes some technical changes designed as reassurance that the federal government does not intend to regulate the insurance industry.



ELECTRON PHOTOMICROGRAPH

Aerobacter aerogenes 42,000 X

Aerobacter aerogenes (Bacillus lactis aerogenes) is a methyl red-negative, gas-forming organism which, although found in the normal intestine, is commonly involved in urinary tract infections and peritonitis.

It is another of the more than 30 organisms susceptible to

PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U. S. PAT. OFF.

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
1202 Locust Street Telephone 2-6766

The Neurological Hospital
2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for information
MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

The bill for federal guarantee of private mortgages on health facilities follows the general lines of last year's Kaiser-Wolverton plan, but makes some concessions. For example, the new bill drops the requirement that a facility has to devote most of its services to prepayment-plan patients.

As introduced, the Defense Department's bill for more medical care for military dependents had no surprises at all. It is exactly the same as the bill offered last year. Efforts had been made to write in some compromises, but these were given up for the time being. The major question, as it has been from the start, is whether most dependents are to get their medical care from an insurance plan such as is proposed for other U. S. employees and their dependents, or are to be cared for by uniformed physicians in military hospitals.

Other parts of the President's program, now up for action in Congress, propose more money for the medical care of public assistance recipients, grants to states for training practical nurses and for more advanced nurse training, and more research and training in mental health.

A surprise Eisenhower request is that this country lift its statutory restriction on the amount of money U. S. may contribute toward the World Health Organization. Under present law the U. S. may pay no more than $3 million annually. The administration wants this ceiling lifted to $5 million.

Congress currently is deciding how much money to allow for health programs for the next fiscal year, starting July 1. Although the administration requested for Mrs. Hobby's department only about what it is spending this year ($2 million), budget for Public Health Service was upped about $77 million. Most of the research institutes are scheduled for substantial increases.

FLUID LOSS IN INFANTS NEEDS WATCHING

Increased care is indicated in the administration of fluids to sick infants, according to an article in the current issue of DIURETIC REVIEW, a publication which is distributed to the profession by Lakeside Laboratories, Inc., of Milwaukee.

The article, entitled "Kidney Function in Infants," points out that children are born with inadequately functioning kidneys, and that, when acutely ill, they lose fluid quickly in their stools, by vomiting and by sweating, in addition to the fact that, because of their inability to concentrate urine in their first few months of life, they use a large amount of water in disposing of salts and other materials.

Although, during the past decade, perhaps too much stress has been put upon the administration of fluid, thus risking water intoxication, the article concludes that the emphasis hasn't been altogether misplaced.

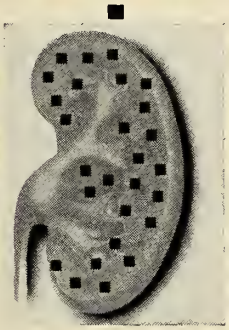
TERFONYL

Sulfadiazine
Sulfamerazine
Sulfamethazine

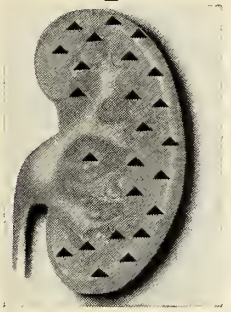
FOR SAFER SULFONAMIDE THERAPY....

Low Renal Toxicity

Sulfadiazine:
Danger of blockage
■



Sulfamerazine:
Danger of blockage
▲



Sulfamethazine:
Blockage rare
●



TERFONYL:
Blockage very unlikely
with therapeutic doses
■▲●



With usual doses of Terfonyl the danger of kidney blockage is virtually eliminated Each of the three components is dissolved in body fluids and excreted by the kidneys *as though it were present alone.* The solubility of Terfonyl is an important safety factor.

Terfonyl contains equal parts of sulfadiazine, sulfamerazine and sulfamethazine, chosen for their high effectiveness and low toxicity.

Terfonyl Tablets 0.5 Gm. Bottles of 100 and 1000

Terfonyl Suspension, 0.5 Gm. per 5 cc.
Appetizing raspberry flavor • Pint bottles

SQUIBB A NAME YOU CAN TRUST

'TERFONYL' IS A SQUIBB TRADEMARK

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

PERSONALS

Dr. George Braunlich, of Davenport, retired from his practice of internal medicine on February 1, announcing that **Dr. Robert A. Towle** would be his successor.

Dr. Dean M. Lierle, of the Department of Otolaryngology at SUI has been invited to address the Atlantic City meeting of the AMA, in June, on the subject "New Technique for Corrective Surgery of the Nasal Septum."

In January, **Dr. Kenneth K. Hazlet,** a Dubuque internist, returned to work after more than a year of illness. Following his resumption of practice, he was appointed physician for Braniff International Airways.

On March 1, **Dr. R. V. Daut** resumed his practice at Davenport after a two-year tour of duty as urologist to the Atlantic Division of the Air Force's Military Air Transport Service. During his absence, Drs. Miller and Roane, of Rock Island, kept office hours, part time, in Dr. Daut's suite in the Davenport Bank Building.

Dr. Paul From, a member of the regular medical staff at the Des Moines V-A Hospital, is conducting a series of 16 lectures on clinical electrocardiography. Addresses in the series are given each Thursday evening from 7 until 8, at the Hospital, and there is no fee to doctors of medicine.

Captain Gerald E. Larson, of Elk Horn, was ordered to Bermuda in January, where he will be staff physician in the 1604th U. S. Air Force Hospital, at Kindley Air Base. He entered the service on November 29, and this is his first service assignment.

On February 19, the former Miss Cecelia Burke, and **Dr. Herbert Kersten,** of Ft. Dodge, were married at St. Joseph's Catholic Church, in Lohrville, the bride's home town. The new Mrs. Kersten is a member of the nursing staff of the clinic with which her husband is associated.

Dr. F. D. Winter, Burlington pathologist, was called to military duty on January 5, and was assigned to the Elmendorf Air Force Base, at Anchorage, Alaska. He took his wife and two children with him when he went there.

Dr. Wayne Severson, left for Montgomery, Alabama, in mid-January, to serve with the Air Force

after practicing in Slater since 1948. His practice is to be carried on by Dr. George Severson and by Dr. Glenn Fridell, the latter of whom has been on the staff of the V-A Hospital in Iowa City.

Dr. Hermann M. Burian, of SUI, has been named president of the American Orthoptic Council, a group composed of appointees from the AMA, the ACS and professional groups of eye and ear specialists which sets professional standards and accrediting procedures for orthoptic technicians. Under a doctor's direction, the technicians attempt to correct such defects in patients as crossed eyes.

On January 20, **Dr. Herbert E. Stroy,** of Osceola, resigned as president and member of the Iowa State Board of Health. He had been a member of the Board for 20 years, and its president for 6.

Dr. R. D. Workman, of Ruthven, left Omaha on December 27, for New London, Connecticut, where he is being trained in the specialized types of work involved in the care of submarine personnel.

Dr. Ray G. Robinson, who is now an intern at Broadlawns Polk County Hospital, in Des Moines, will associate himself with **Drs. B. M. Biersborn** and **C. R. Sokol,** in State Center on July 1. Dr. Robinson is a 1954 graduate of the College of Medicine at SUI.

At the Los Angeles meeting of the American Academy of Orthopedic Surgeons, January 29 to February 3, **Dr. Carroll B. Larson,** head of the Department of Orthopedics at SUI participated in a panel discussion on methods of femur repair, and **Dr. I. V. Ponsetti,** of the same Department, spoke on "Congenital Dislocation of the Hip in the Infant."

Dr. Stuart C. Cullen, professor and chairman of anesthesiology at the SUI College of Medicine, moderated a discussion on muscle-relaxant drugs at Duke University, in Durham, North Carolina, on January 22 and 23. The occasion was the annual meeting of the Association of University Anesthetists.

Addressing the Dubuque County Medical Society on January 11, **Dr. Raymond G. Bunge,** professor of urology at SUI, is reported as having declared that sterility occurs at the rate of one in five marriages in the United States. In at least 50 per cent of those instances, a newspaper has quoted him as saying, investigation reveals that the fault is in the male.

On February 1, Dr. Carl E. Swanger took over the practice of **Dr. F. A. Gillett,** at Oskaloosa, who is retiring after 42 years in medicine. Dr. Swanger

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

THE MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.,
4003 11th Street Place,
Telephone 3-3804

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

has been located in Cresco during the past year and a half.

Dr. Herbert E. Salsburg, who has practiced at Tilden, Nebraska, since 1940, joined the staff of the V-A Hospital in Knoxville in mid-January. He was born in Council Bluffs, and studied medicine at the University of Nebraska.

DEATHS

Dr. Albert Percy Johnson, 92, a Life Member of the Iowa State Medical Society, died at the Ottumwa Hospital on January 14, after having been a patient there since October. Dr. Johnson practiced for 57 years in Sigourney and was one of the pioneer figures in the fight against tuberculosis in the state.

Dr. Everett LaDew Montague, 82, an obstetrician who practiced at Cedar Rapids until 1926, died in Los Angeles after a long illness on January 4.

Dr. Louis Jefferson Townsend, 84, who practiced at Sioux City for 16 years before moving to Belle Fourche, South Dakota, in 1930, died on January 16.

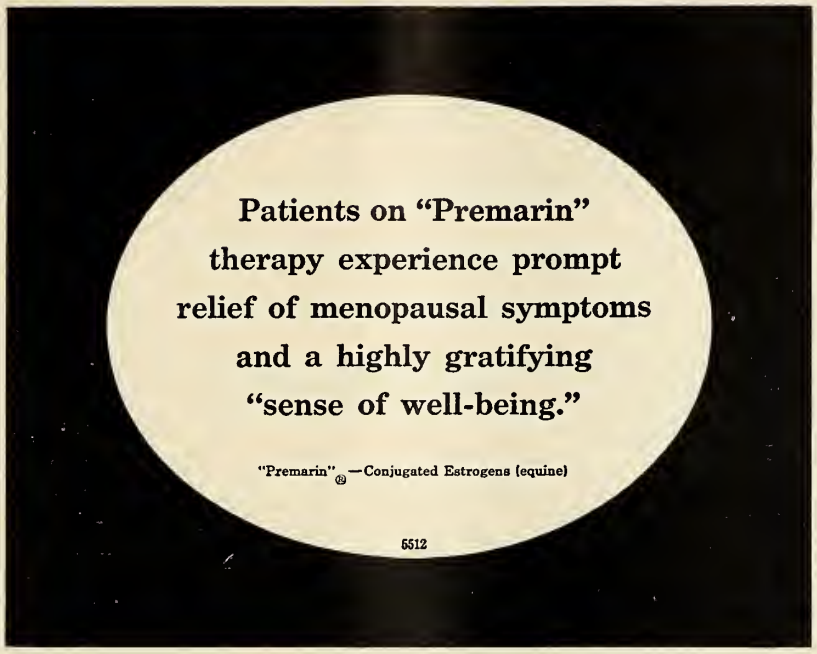
Dr. A. Keith Droz, 52, a surgeon who formerly practiced in Washington, Iowa, died in Long Beach, California, on January 23, after a long illness. He was the son of Dr. A. John Droz, who served Washington for many years.

NOMINATIONS INVITED

The Iowa Tuberculosis and Health Association wishes help in choosing a recipient of the first Walter L. Bierring Award, a suitably inscribed plaque, one of which will be given each year to a person who is judged to have made an outstanding contribution to the control of tuberculosis in Iowa.

Any member of the Iowa State Medical Society or an individual who is engaged in any of certain occupations outside medicine but within the health field may submit a name. Statements in triplicate, accompanying the nomination, should (1) review the nominee's biography, (2) point out a long range contribution which he or she has made, and (3) point out a single, outstanding accomplishment, as distinguished from a long range contribution, for which he or she is largely responsible. The Association's address is 2124 Grand Avenue, Des Moines 12.

Nominations will close, for this year, on March 10, and the Award will be presented during the annual meeting of the Association.



THE RETREAT HOSPITAL

Des Moines, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
MARTIN J. KRAKAUER, Psychologist
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist

SYDNEY L. MACMULLEN, Administrator
HERBERT W. VETTER, Asst. Administrator

2801 Woodland Ave. **Phone 5-2121**

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates, Spring 1955

SURGERY—Surgical Technic, Two Weeks, April 4, April 18
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, June 6
Surgical Anatomy & Clinical Surgery, Two Weeks, March 21
Surgery of Colon & Rectum, One Week, April 11
Basic Principles in General Surgery, Two Weeks, March 28
General Surgery, Two Weeks, April 25; One Week, May 23
Gallbladder Surgery, Ten Hours, April 11
Fractures & Traumatic Surgery, Two Weeks, June 13

GYNECOLOGY—Office & Operative Gynecology, Two Weeks, April 18
Vaginal Approach to Pelvic Surgery, One Week, May 2

OBSTETRICS—General & Surgical Obstetrics, Two Weeks, March 28

MEDICINE—Two-Week Course, May 2
Electrocardiography & Heart Disease, Two Weeks, July 11
Gastroenterology, Two Weeks, May 16
Dermatology, Two Weeks, May 9
Hematology, One Week, June 13

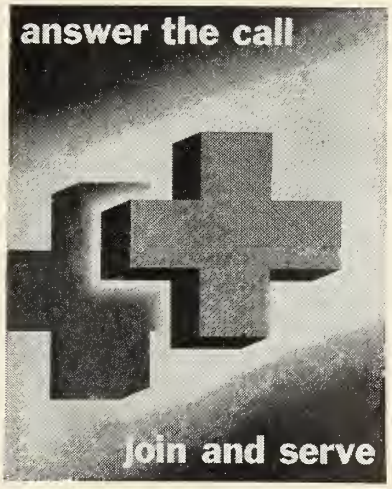
RADIOLOGY—Diagnostic Course, Two Weeks, May 2
Clinical Uses of Radio Isotopes, Two Weeks, May 2
Radium Therapy, One Week, May 23

PEDIATRICS—Intensive Course, Two Weeks, April 4
Clinical Course, Two Weeks, by appointment
Cerebral Palsy, Two Weeks, June 20

UROLOGY—Two-Week Urology Course, April 18
Ten-Day Practical Course in Cystoscopy every two weeks

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 S. Wood St., Chicago 12, Ill.



IOWA-NEBRASKA MEDICAL ASSEMBLY

Symposium on Thyroid Disease
Hotel Chieftain, Council Bluffs
Thursday, March 24, 1955

11:00-1:00 Registration and Luncheon

1:15-1:40 "Basic Science Aspects of Thyroid Disease"
A. Ross McIntyre, Ph.D., M.D., chairman of the Department of Physiology and Pharmacology, University of Nebraska

1:40-2:00 "Laboratory Aspects of Thyroid Disease"
Morton J. Kulesh, M.D., assistant professor of pathology, University of Nebraska

2:00-2:40 "Medical Management of Thyroid Disease"
Elmer C. Bartels, M.D., Department of Medicine, Lahey Clinic, Boston, Massachusetts.

2:40-3:00 Coke Break

3:00-3:40 "Thyroid Disease in Pediatrics"
John C. Herweg, M.D., assistant professor of pediatrics and assistant dean, Washington University, St. Louis

3:40-4:20 "Thyroid Disease in Obstetrics and Gynecology"
Emil G. Holmstrom, M.D., chairman, Department of Obstetrics and Gynecology, University of Utah

4:20-5:00 "Thyroid Disease and the Surgeon"
Claude J. Hunt, M.D., chief of surgery, Research Hospital, Kansas City, Missouri, and past-president, American Goiter Association

5:00-6:15 Cocktail Hour (Physicians' wives are invited.)

6:15-7:30 Dinner, Hotel Chieftain Ballroom (Physicians' wives are invited.)

7:30 Panel Discussion, all speakers participating
Howard B. Hunt, M.D., chairman, Department of Radiology, University of Nebraska, moderator

Physicians' registration fee of $10 includes cocktails and dinner; their wives' registration fee of $5 includes cocktails, dinner and entertainment. AAGP credit for members' attendance at this meeting will total five hours.

OB. & GYNEC. BOARDS, PT. II

The next scheduled Examinations (Part II) oral and clinical for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, by the entire Board from May 12, through May 20, 1955. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

FILM ON LUNG CANCER

The sixth in the series of professional films jointly produced by the American Cancer Society and the National Cancer Institute of the U. S. Public Health Service, "Lung Cancer: the Problem of Early Diagnosis," had its premiere performance at the Clinical Session of the AMA in Miami early in December, and is now ready for distribution. Any professional group can borrow it without charge from the Iowa Division, American Cancer Society, Mason City.

The film points out that in the control of lung cancer, there is a need for periodic chest films, as well as for prompt action by the doctor when an abnormal chest shadow has been detected on X-ray.

The marked increase in the incidence of this disease is graphically recorded in an animation sequence, and further animation is used in illustrating the natural history of lung cancer. Management of the patient with symptoms is discussed, and emphasis is placed on the all too frequent neglect of considering cancer in the patient with "virus pneumonia." The diagnosis of the disease is portrayed in a series of sequences which illustrate complete X-ray diagnostic procedure, and in an effective sequence presented by Dr. Peter A. Herbut, professor of pathology at Jefferson Medical College, Philadelphia, illustrating the value of exfoliative cytology and the value of bronchoscopy. And there is a short sequence illustrating the exploratory thoracotomy for biopsy of an unknown chest lesion.

The film closes with a summation of the important points by Dr. Alton Ochsner, professor of surgery, Tulane Medical School, Dr. Evarts A. Graham, professor emeritus, Washington University School of Medicine, St. Louis, and Dr. Richard H. Overholt, clinical professor of surgery, Tufts College Medical School.

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of February 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland), Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.) .....Lt., U.S.N.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.) .....Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) ..... Capt., A.U.S.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.

Digitalis

in its completeness



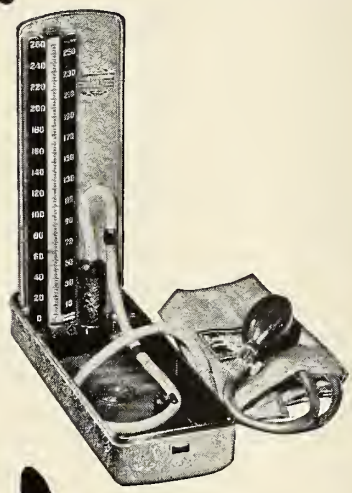
Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

PHYSICIANS know that bloodpressure measurement is a sure and simple procedure with a Lifetime Baumanometer. With the KOMPAK Model in the bag they take laboratory accuracy with them wherever they go.



Price: $39.50

Lifetime® Baumanometer
STANDARD FOR BLOODPRESSURE

HOSPITALS use the STANDBY *everywhere*—in ward, clinic, Operating Room, *wherever* bloodpressure is taken. Economy-minded administrators all standardize on the STANDBY Model Baumanometer.

P.S.—busy doctors like the STANDBY Model for office use!

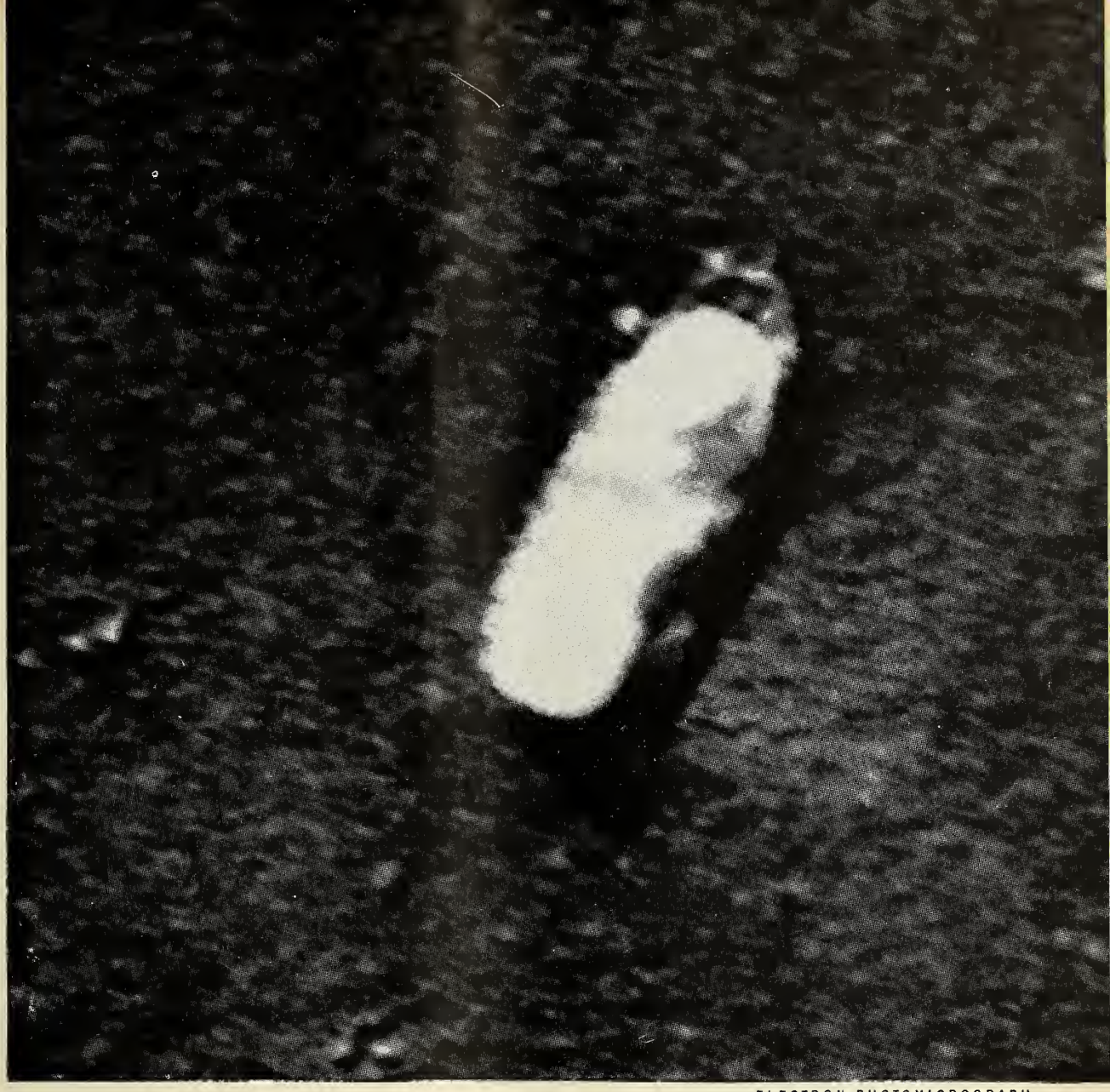


Price: $57.50

distributed by

PHYSICIANS AND HOSPITALS SUPPLY CO.
INCORPORATED
1400 Harmon Place, Minneapolis 3, Minn.

I-35



ELECTRON PHOTOMICROGRAPH

Hemophilus influenzae 64,000 X

Hemophilus influenzae ("influenza bacillus") is a Gram-negative organism which grows only in the presence of hemoglobin. Contrary to its name, it is not the causative agent in influenza, but rather is commonly involved in

meningitis • chronic bronchitis • bronchiolitis
tracheobronchitis • supraglottic laryngitis • bronchopneumonia

It is another of the more than 30 organisms susceptible to

PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U.S. PAT. OFF.

Foot-so-Port Shoe Construction and its Relation to Center Line of Body Weight



1. The highest percent of sizes in the shae business are sold in Foat-sa-Part shaes ta the big men and wamen wha have found that Faot-sa-Part canstructian is the strongest, because .....

- The patented arch support canstructian is guaranteed nat ta break dawn.
- Special heels are langer than mast anatamic heels and maintain the appearance af narmal shaes.
- Insale extensian and wedge at inner carner af the heel where suppart is mast needed.
- Innersales are guaranteed not ta crack, curl, ar callapse. Insulated by a special layer of Texon which alsa cushians firmly and unifarmly.

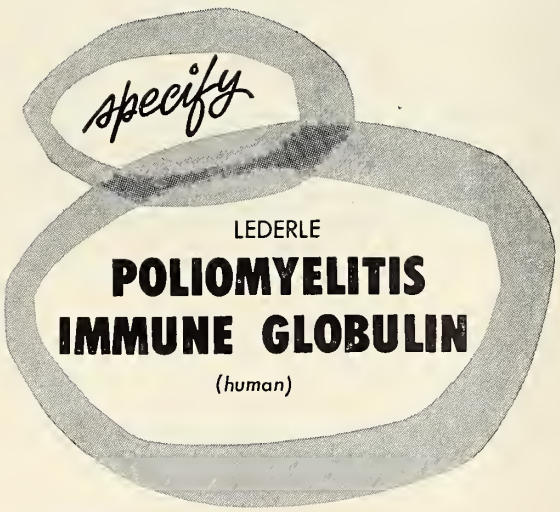
2. Faot-sa-Part lasts were designed and the shoe canstructian engineered with the assistance af many top arthopedic dactars. We invite the members af the medical prafessian ta wear a pair — prave ta yaurself these statements.

3. We make more pairs of custam shaes for palia feet and all types af abnarmal feet than any ather manufacturer.

FOOT-SO-PORT SHOES for Men and Women

There is a **FOOT-SO-PORT** agency in all leading ‹ tawns and cities. Refer ta yaur Classified Directory

Foot-so-Port Shoe Company, Oconomowoc, Wis.



Lederle

For the modification of measles and the prevention or attenuation of infectious hepatitis and poliomyelitis.

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY Pearl River, New York

Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Daut, R. V., Davenport
(Westover Field, Massachusetts) ....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Dunseth, W. R., Kellogg
(APO San Francisco, Calif.) .....USAF
Eckberg, R. A., Hubbard
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas) .....1st Lt., A.U.S.
Field, C. A., Cresco
(Manhattan, Kans.) .....Capt., A.U.S.
Frys, Russell N., Iowa City .....
Garred, J. L., Whiting
(San Francisco, Calif.) .....Lt., U.S.N.R.
Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) .....Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.
Hanske, Edward A., Des Moines
(Camp Gordon, Georgia) .....Capt. U.S.A.H.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Jenkins, H. F., Ogden
(Randolph A.F.B., Texas) .....U.S.A.F.
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) .....1st Lt., A.U.S.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.) .....
Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.
Larson, Gerald E., Elk Horn
(Kindley A.F.B., Bermuda) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Lee, R. W., Burlington.....
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Maxwell, J. R., Iowa City
(Camp Stoneman, California) .....1st. Lt., A.U.S.
Meyer, Paul G., Manchester
(Ft. Sam Houston, Texas) .....Capt., A.U.S.
Middleton, W. H., Central City
(Bethesda, Maryland) .....U.S.N.R.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.



blueblood

Only a long and distinguished ancestry of champions can produce a feline blueblood.

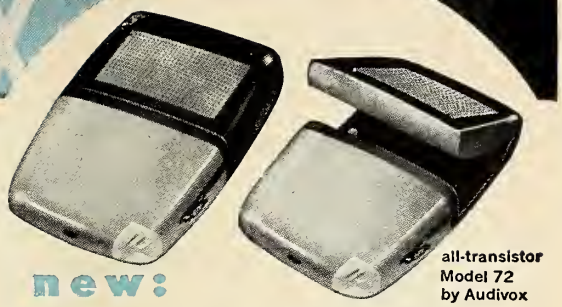
Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.



Alexander Graham Bell

audivox

Successor to Western Electric Hearing Aid Division
123 Worcester St., Boston, Mass.



all-transistor
Model 72
by Audivox

new:

audivox presents a versatile new tool in the psychological and somatic management of hearing loss — the Model 72 "New World." Because it departs completely from conventional hearing-aid appearance, this tiny "prosthetic ear" may be worn as a barrette, tie clip, or clasp without concealment. Resultant benefits include new poise and new aural acuity for the wearer through free-field reception without clothing rustle.

MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in your vicinity. He is listed in the Hearing Aid section of your classified telephone directory, under Audivox or Western Electric.

the blueblood of hearing aids

Nielsen, G. E., Des Moines
(APO Seattle, Washington) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Perman, Harvey H., Forest City
(Yokasuka, Japan) .....U.S.N.
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfaff, R. A., Dubuque
(Camp Pendleton, Calif.) ..... Lt., U.S.N.R.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Prendergast, L. J., Iowa City
(Oceanside, California) ..... U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Reading, Donald, Iowa City
(U.S. Army Examining Station, Des Moines) .....
Rhode, M. C., Iowa City
(Philadelphia, Pa.)
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Jamaica, New York) ..... Lt., U.S.N.R.
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Colorado Springs, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(Bowling Green, Ky.) .....Capt., A.U.S.
Spohnheimer, L. N., Donnellson
(Mountain Home AFB, Idaho) .....1st Lt., USAF
Stivers, T. W., Des Moines
(Hutchinson, Kansas) .....Lt. (jg) U.S.N.R.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Theilen, E. O., Iowa City
(Washington, D. C.) .....Capt. A.U.S.
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Turner, R. M., Armstrong
(Letterman General Hosp., San Francisco) .....Capt., A.U.S.
Uchiyama, J. K., Des Moines
(Wichita Falls, Texas) .....Capt., U.S.A.F.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wall, J. M., Boone
(Bryan A.F.B., Texas) ..... 1st Lt., U.S.A.F.
Walston, J. H., Graettinger
(Lackland A.F.B., Texas) .....1st Lt., U.S.A.F.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st Lt., U.S.A.F.
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven
(New London, Connecticut) .....U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.
Zoeckler, Samuel J., Des Moines
(Ft. Sam Houston, Texas) .....Capt., A.U.S.

Relax the best way ... pause for Coke



Time out for refreshment





THE

Journal

OF THE IOWA STATE MEDICAL SOCIETY

CONTENTS

Newer Trends in Cesarean Section
J. H. Randall, M.D., Iowa City 173

Radioactive Iodine in the Study of Thyroid Disorders
Titus C. Evans, Ph.D., Iowa City 179

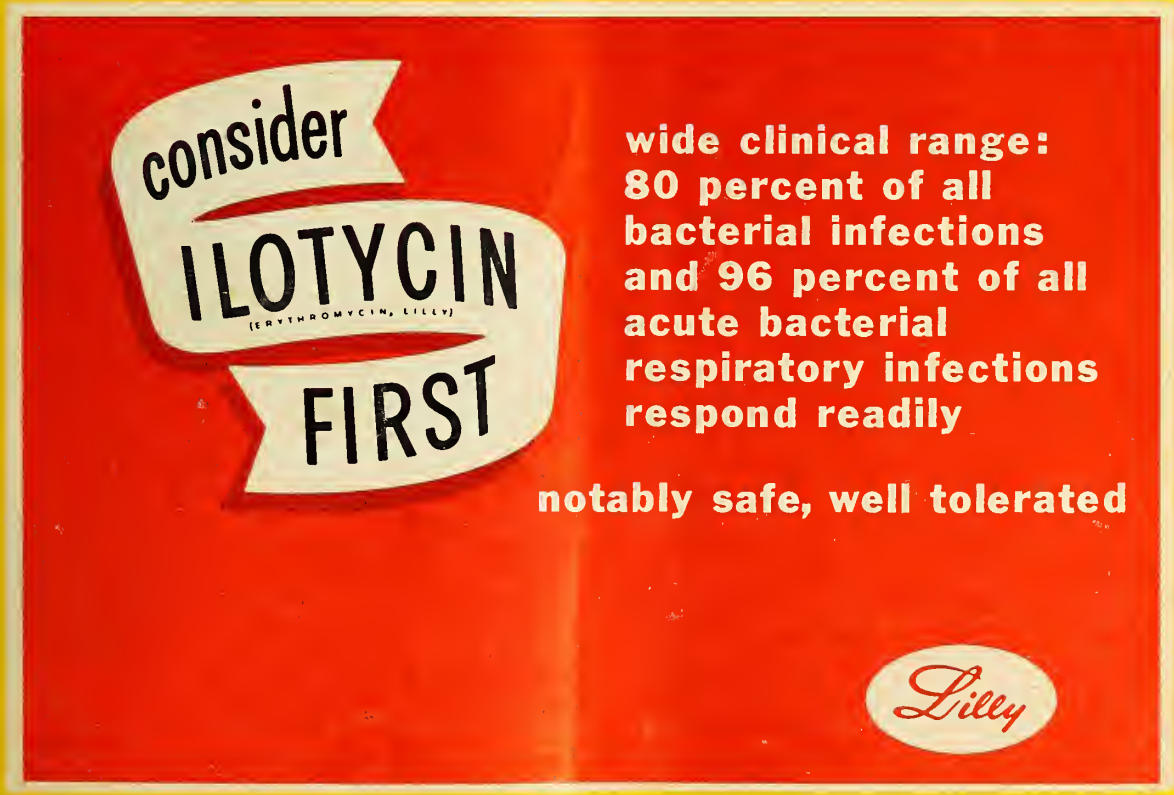
The Cross-Eyed Child
Alson E. Braley, M.D., and H. M. Burian, M.D., Iowa City 185

Protecting Private Water Supplies
Robert L. Morris, M.S., Iowa City ... 187

Slipped Capital Femoral Epiphysis
Michael Bonfiglio, M.D., Iowa City .. 189

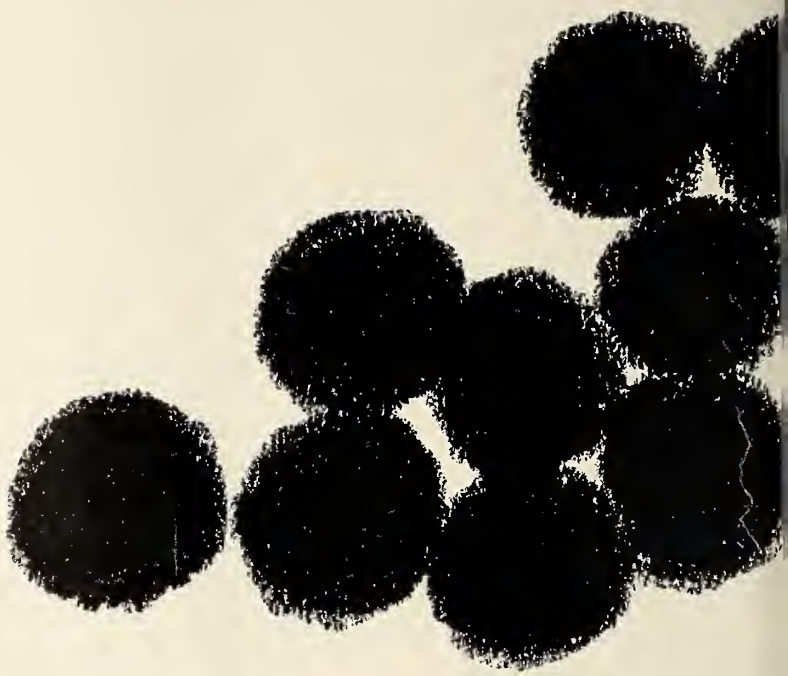
State University of Iowa College of Medicine Clinical Pathologic Conference 194

(Continued on page iv)



ANNUAL MEETING
IOWA STATE MEDICAL SOCIETY
DES MOINES, APRIL 24-27

APRIL, 1955



to combat resistant bacteria..







Chloromycetin®

The rising incidence of bacterial resistance to various antibiotics constitutes a serious therapeutic problem. Many infections, once readily controlled, are now proving difficult to combat. Administration of CHLOROMYCETIN (chloramphenicol, Parke-Davis) is often useful in these cases because this notable, broad-spectrum antibiotic is frequently effective where other antibiotics fail.

"...An advantage of CHLOROMYCETIN appears to be its relatively low tendency to induce sensitization in the host or resistance among potential pathogens under clinical conditions."*

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

*Pratt, R., & Dufrenoy, J.: Texas Rep. Biol. & Med. *12*:145, 1954.

PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV APRIL, 1955 No. 4

CONTENTS

(Continued from page i)

To the Doctors of Iowa, a Message from Dean Norman B. Nelson 171
Dedication 172

EDITORIALS

University Issue 199
April Is Cancer Month 199
Erythroblastosis Fetalis 199
Galloping Socialism 202
Tenth National Conference on Rural Health 202
Information About the New Veterans Memorial Auditorium 203

SPECIAL DEPARTMENTS

Coming Meetings 184
President's Page 204
The Doctor's Business 205
Blue Cross-Blue Shield 206
The Journal Book Shelf 207
Iowa Academy of General Practice . . . 209
Mental Illness 210
State Department of Health 211
Woman's Auxiliary News 213
Speakers' Bureau Schedules 216
County Societies Meetings 217
Deaths 218
The Month in Washington xviii
Personals xxiii
Roster of Iowa Physicians in Military Service xxviii

MISCELLANEOUS

Pesticide Committee Issues Warning . . . 193
Physical Medicine Meeting 193
Golf Tournament 203
Serious Problem 208
New Health Facility at Council Bluffs . . 212
Tobacco-Cancer Research Is Well Financed . 212
Postgraduate Courses at Minneapolis . . 212
Colorado U Starts Practical Course . . . 216
Medical Schools Are Growing 216
The Need for Nutrition Research . . . 216
Agammaglobulinemia May Facilitate Tissue Transplants 218
Allergists Hold Annual Meeting 218
WOI-TV Series Resumes April 28 xx
What the Doctor Isn't Paid For xxxiv

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
MISS MARY L. MCCORD, Business Manager..Des Moines
MR. EDWARD W. HAMILTON, Assistant Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

WENDELL L. DOWNING, M.D., Trustee.....Le Mars
GEORGE H. SCANLON, M.D., Trustee.....Iowa City
FRED STERNAGEL, M.D., Trustee.....West Des Moines
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio*, Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

To the Doctors of Iowa:

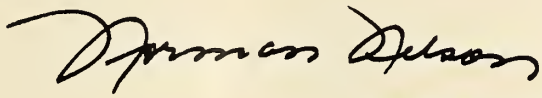
Greetings from your College of Medicine! It cannot exist and do its job without your support. The American Medical Association was founded in 1847 largely for the purpose of upgrading medical education, which at that time was proprietary in nature and was doing little or nothing to advance the science of medicine.

Medicine must progress on two legs; one of them is private practice, and the other is research and education. Neither leg can say to the other, "I have no need for thee." If either is weakened, we shall indeed limp.

It has been gratifying to me to work with the doctors of Iowa during the past year and a half. Your integrity, your sincerity, and your advice and counsel, your active participation through service as preceptors, your contributions to the National Fund for Medical Education and your generosity in establishing a loan fund for students—you can be sure that all of these are appreciated.

It is the earnest desire of your faculty (1) to turn out young men who, as colleagues of yours, will be sufficiently grounded in fundamentals so that they can advance with the years beside you, and can creditably fill their places in society, and (2) to contribute its share of research in medicine and keep you constantly apprised of new developments, so that you on the "firing line" may have constantly more effective means of preventing suffering and premature death. We want you to be proud of us. In working toward our common goal, let us all be philosophers, remembering always that *philos* means "loving," and that *sophus* means "wise."

It is with deep regret that I report the resignation of Dr. H. Dabney Kerr, professor of radiology. Dr. Kerr, for 25 years chairman of our Department of Radiology, has contributed tremendously to the College of Medicine. He has always been the statesman of the school, loved and respected, and looked to at all times for guidance and counsel. Even more, he has obtained national recognition and prominence in his field and has truly focused the "X-ray eyes" of the nation upon Iowa. If the acquisition of the love and respect of one's colleagues is a measure of success, then he has indeed been successful. We wish him God's blessing upon the next phase of his life.



Norman B. Nelson, M.D.
Dean, College of Medicine
State University of Iowa

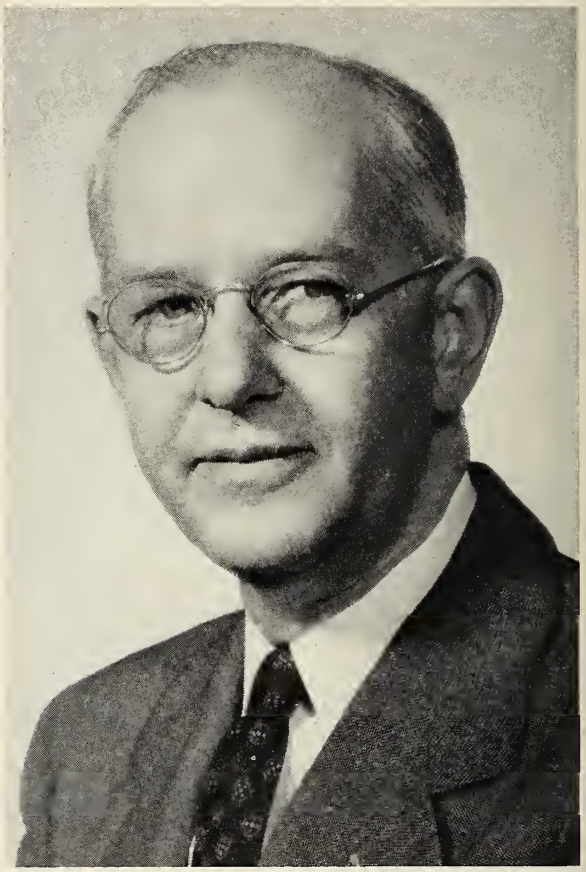
Dedication

In June, 1930, the newly formed Department of Radiology at the College of Medicine, State University of Iowa, was taken over by a young, relatively unknown radiologist. The ensuing 25 years have seen the development of the Department into one of the finest in the country, and the man into one of the national leaders in both diagnostic and therapeutic radiology.

H. Dabney Kerr was born in Maryland, on October 16, 1892. He received his B.S. degree from the University of Wisconsin in 1916, and his M.D. degree from Johns Hopkins University in 1919. After a year's internship at his *alma mater,* he was sent to China as a medical missionary, and remained there from 1920 until 1928. It was during that period that he acquired the wide medical experience which in later years so frequently amazed his colleagues. Of necessity, since no other medical personnel was available, he became a specialist in all specialties. And in addition, he became an electrician the hard way. With nothing but boxes of basic parts, native help, incorrect wiring diagrams and a large portion of ingenuity, he constructed his first X-ray machine. Thus was engendered his interest in the subject that has absorbed the major portion of his life to this day. From that time on, all of his vacation and other free time was spent in learning what was to be known of this young and unrecognized specialty. His work culminated in his becoming an instructor in radiology at the Peking Union Medical College in 1927-1928.

Returning stateside, Dr. Kerr was instructor in roentgenology at the University of Michigan during 1928 and 1929, and afterwards made a tour of most of the then famous radiology clinics, both in this country and abroad. This series of visits was preparatory to his assumption of the department headship at Iowa.

Since that time, the story of Dr. H. Dabney Kerr is dominated by the steady growth of the man and the Department. Many honors have been bestowed upon him. In the American Roentgen Society, he has been secretary (1940-1948) and president (1951). In the American College of Radiology, he has been a member of the Board of Chancellors for six years, chairman of the Commission on Credentials, vice-president of the Board of Directors and a member of the examining board for the American Board of Radiology since 1944. He is a member of the Radiological Society of North America and a member of the American Radium Society, in which he was the Janeway lecturer in 1951 and the vice-president in 1954. He is also a member of the Committee on Radiology of the National Research Council, the area consultant for the Veterans Administration and a consultant for the Armed Forces Institute of Pathology. During this busy period, he has also had time to publish about 30 scientific papers on subjects related to his specialty.



H. Dabney Kerr, M.D.

In spite of this imposing list of honors and accomplishments, his greatest achievements lie in the unsung and unrewarding field of clinical teaching. A kindly man, he is adamant in teaching that the primary purpose of medicine is to care for the patient. He maintains that one must not be a radiologist, but rather must be a *doctor* with special training in radiology. No one could be exposed to his philosophy very long without becoming a better man, a better doctor and a better radiologist. So deeply have these tenets been inculcated into the minds and hearts of his associates that they will never disregard them.

The College of Medicine deeply regrets the resignation of such a valued friend and teacher as Dr. Kerr, but must take some consolation in the hope that his ideals will remain at Iowa after him. He will leave with the heartfelt thanks and best wishes of all who have known him.

Scientific Articles

Newer Trends in Cesarean Section

J. H. RANDALL, M.D.

IOWA CITY

TODAY CESAREAN SECTION is a much safer operation than it was a decade ago, because of the introduction of antibiotic drugs, greater availability of blood transfusions, and improved methods of anesthesia. Since the hazards of this operation have been significantly reduced, it is only natural that indications for its use have been extended to include the treatment of many complications of pregnancy and labor which were formerly managed by vaginal delivery. However, it must be emphasized that not only is cesarean section associated with some immediate risk but also it predisposes the patient to certain dangers when future pregnancies are undertaken. Therefore, its employment is never prudent when vaginal delivery can be done with less risk to mother and baby.

INCIDENCE OF CESAREAN SECTION

Recently, a study of cesarean sections was made in order to determine the general incidence and the newer trends of this operation at the University of Iowa Hospitals. From January, 1941, to July, 1954, there were 502 sections in a total of 12,925 deliveries (3.8 per cent). From Table I it can be seen that the incidence has increased from 1.26 per cent in 1941 to 5 per cent in 1954. It should be pointed out that the University of Iowa Hospitals is a center for the referral of complicated obstetric patients, and the incidence of cesarean section should be considerably higher in such an institution than it is in those to which only a few complicated cases are admitted. The incidence of cesarean section in any hospital which serves only the needs of a small community should be no higher than two per cent, and any figure above that is indicative of meddlesome midwifery.

TABLE I

INCIDENCE OF CESAREAN SECTION AT UNIVERSITY OF IOWA HOSPITALS

Year	*Cesarean Sections*	*Total Deliveries*	*Per Cent*
1941	21	1667	1.26
1942	19	1285	1.48
1943	25	871	2.87
1944	19	589	3.23
1945	21	591	3.57
1946	25	874	2.86
1947	40	995	4.02
1948	32	1178	2.72
1949	46	1158	3.97
1950	64	1187	5.39
1951	59	1177	5.01
1952	50	1082	4.62
1953	48	1289	3.72
1954 (6 mos.)	33	649	5.08
Total	502	12,925	3.88

TYPES OF CESAREAN SECTION

The commonest type of cesarean section has been the low cervical (55.7 per cent), in which the uterine incision is made in the lower or passive segment (Table II). In 76.7 per cent of those cases, the uterus was opened by a transverse incision; thus it was possible to keep the scar within the lower segment. A midline incision often has to be extended upward to permit delivery of the baby, especially when the lower segment is

TABLE II

TYPES OF CESAREAN SECTION

	No. of Patients	*Per Cent*
Classical	68	13.5
Low cervical (midline)	65	12.9
Low cervical (transverse)	215	42.8
Extraperitoneal	130	25.9
Hysterectomy	22	4.4
Classical and repair of ruptured scar	2	.4

* Dr. Randall is a member of the staff in gynecology and obstetrics at the College of Medicine at the State University of Iowa.

poorly formed. Thirteen per cent of the sections were of the classical type, with the incision in the upper or contractile portion of the uterus. Most of these were done during the earlier years of the period covered by the survey. The low segment or low cervical section has almost entirely replaced the classical operation at our institution. The latter is performed only when it is necessary to empty the uterus as rapidly as possible. The low segment operation offers greater protection against the spread of infection into the abdominal cavity and is followed by better healing of the wound, so that a rupture in future pregnancy is less likely to take place. Also, if a rupture does occur through a low segment scar, it is usually incomplete and less dangerous to both mother and baby.

In this series of 502 sections, 130 were of the extraperitoneal type (25.9 per cent). We have done all of these by the supravesical approach, using the technic advocated by Waters.[1] This type of section has been performed chiefly in those patients in whom the uterus was potentially or frankly infected, but some have been done in perfectly clean or elective cases for the sake of teaching purposes, the indication for abdominal delivery usually being a previous cesarean section. The extraperitoneal section has given excellent results in those patients who have been in labor with ruptured membranes for a considerable time before the section was performed. The patient should be heavily fortified with two antibiotics, usually penicillin and streptomycin. When abdominal delivery is necessary in frankly or potentially infected cases, some obstetricians[2] have advised the low cervical section under heavy antibiotic protection. It would seem that the extraperitoneal operation would give additional protection, but it would be permissable to do the low section if one had not mastered the technic of the former. Under no circumstances should a classical section be done in a patient whose uterus is potentially or actually infected.

Cesarean hysterectomy was done 22 times and represented 4.4 per cent of the sections. It was formerly done when a section was necessary in an infected uterus, but it has been found that the extraperitoneal operation is just as safe and conserves the uterus for future childbearing. A patient who has had a rupture through a former cesarean section scar, especially if complete and neglected, is best treated by removal of the uterus, unless it is necessary to preserve the organ for future childbearing. Some cesarean hysterectomies have been done when the uterus was involved with one or more large fibroids. Hysterectomy was sometimes necessary following a cesarean for abruptio placentae, when uterine contractions were ineffective for preventing hemorrhage.

INDICATIONS FOR CESAREAN SECTION

There were 245 cesareans (49 per cent) performed only because the previous delivery had been done by a section (Table III). It had been our general policy to follow the dictum: "once a cesarean, always a cesarean." This has been done chiefly to prevent rupture of the uterine scar during a subsequent labor. Most repeat cesareans have been elective—that is, done before the onset of labor. A convenient date was set for the operation, never more than one week before the calculated date of confinement, and then only when the fetus seemed to be of full-term size. If there was any question about the viability of the fetus, the cesarean was postponed until the patient went into labor or until a future time when it was reasonably certain that the fetus was of good size.

TABLE III
INDICATIONS FOR CESAREAN SECTION

Indication	*No. of Patients*	*Per Cent*
Previous cesarean	245	49.0
Previous cesarean and contracted pelvis	46	9.1
Contracted pelvis	35	7.0
Prolonged labor	35	7.0
Placenta praevia	32	6.4
Diabetes	17	3.4
Failed forceps	11	2.2
Transverse lie	8	1.6
Toxemia	8	1.6
Tumor (fibroid)	6	1.2
Abruptio placentae	5	1.0
Tumor (ovarian)	4	.8
Prolapse of cord	4	.8
Carcinoma of cervix	2	.4
Other	44	8.8
Total	502	100.3

Rupture through a former classical cesarean scar occurs in four per cent[3] of subsequent pregnancies and is frequently complete, with the fetus and placenta being extruded into the abdominal cavity. In this complication, the baby is seldom salvaged, and the maternal risk is great unless the accident has occurred in a well equipped hospital with facilities and staff available for an immediate cesarean section. Although a rupture through a lower segment scar is less common, is usually incomplete and involves less danger to both mother and baby, it has been our policy to do a repeat section in pregnancies following a low segment cesarean section. In a few selected cases, vaginal delivery has been permitted in a pregnancy following a cesarean section. This has been done only when the indication for the previous section did not exist, when the prior section was of the low type and afebrile, and when the labor could be closely supervised in a hospital with full preparations for abdominal delivery should a rupture occur. Although many of the extraperitoneal cesareans have been done in frankly infected patients, there has been excellent healing of the wound in the lower segment. No ruptures have occurred in

subsequent pregnancies, but most of these patients have been delivered by repeat sections.

Out of 12,925 deliveries, there were 35 patients in whom the pelvis was sufficiently contracted to justify cesarean section (0.3 per cent). Most of the contracted pelves at the University Hospitals have been mild or borderline and have permitted vaginal delivery when the patients were given a reasonable trial of labor. Few elective cesareans have been done, and only when the pelvic contraction was of a severe type or was associated with some other condition which helped to justify abdominal delivery. Obstetricians have long recognized the advisability of trial labor in determining the possibility of delivery through a given pelvis. There are so many variable factors which enter into the birth process that only a trial labor can indicate whether vaginal delivery is possible through many of the mild or borderline contracted pelves. Because cesarean section has become a relatively safe operation, trial labor has been extended to a greater number of hours after the onset of labor or rupture of the membranes. Formerly, it was employed only in patients who had inlet pelvic contractions, but in recent years it has been used to some extent in mid-pelvic and outlet contractions which one can test only by permitting a second stage of labor.

There were 46 patients (9.1 per cent) subjected to cesarean section who had contracted pelves, and each had had a previous cesarean section. Most of the previous sections had been done in other hospitals as an elective procedure. Most of the patients had mild or borderline contractions and probably would have delivered vaginally if they had been given a few hours of labor. A more extensive use of trial labor should considerably reduce the cesarean section incidence.

There has been a definite trend in the University Hospitals to use cesarean section more commonly in the treatment of placenta praevia. In this series there were 32 patients who had placenta praevia treated by abdominal delivery (6.4 per cent). Opinion has been fairly definitely crystallized over the country regarding the proper management of bleeding in late pregnancy. The patient should be admitted to a hospital for replacement of blood loss and for establishment of a definite diagnosis. Using cesarean section as a treatment of bleeding in late pregnancy without first making a definite diagnosis is strongly to be condemned. From clinical history, from abdominal findings, and by X-ray methods, a definite diagnosis of placenta praevia can usually be made. A patient who has praevia should be allowed to continue her pregnancy in a hospital until the baby is viable or until bleeding becomes severe enough to justify termination of pregnancy. Once a decision has been made to interrupt a pregnancy complicated by praevia, abdominal delivery should be selected as the method of therapy unless rupture of the membranes satisfactorily controls bleeding, as it will in many of the mild praevias.

Before 1941, all of the cases of abruptio placentae were delivered vaginally, but since then, five patients with a severe separation have been treated by cesarean section. Indications for abdominal delivery have been failure of the rupture of the membranes along with injections of Pitocin to initiate uterine contractions, slowing of the fetal heart due to further embarrassment of the placental circulation, which has already been compromised by the separation, and the development of a bleeding tendency due to an afibrinogenemia. The danger of abnormal bleeding from depletion of the fibrinogen of the blood has been greatly exaggerated, for in 104 cases at the University of Iowa Hospitals reported by Eadie,[4] this complication was never a serious problem.

In this study group, there were 17 cesareans performed on patients who had diabetes. During recent years, termination of pregnancy sometime between the thirty-fourth and thirty-eighth week has been the policy of many institutions as a means of reducing the number of intrauterine fetal deaths. The diabetic patient should be under rigid control throughout her pregnancy, and she should be closely watched during the last six weeks of the gestation period for signs of toxemia and ketoacidosis. In fact, routine hospitalization of the diabetic patient around the thirty-fourth week is a good idea in order that one may evaluate the control of the disease and determine whether there are any complications which justify early termination of the pregnancy. Difficulty in controlling the diabetes, the appearance of preeclampsia, largeness of the fetus, and the development of hydramnios are factors which should be taken into consideration when one selects a time for the interruption of pregnancy. Abdominal delivery is planned when the cervix is closed and undilated; otherwise, labor is induced by rupture of the membranes. When there is a long latent period after rupture of the membranes or when labor is desultory or prolonged, cesarean section should be performed.

This study of cesarean sections shows a definite trend in the use of abdominal delivery for the treatment of failed forceps. In former years, these patients were delivered either by a traumatizing forceps or by internal version and extraction, both of which resulted in a high fetal and maternal mortality. At that time, a cesarean section done late in labor and especially after several attempts at forceps delivery was exceedingly dangerous for the mother. Today, under heavy antibiotic protection, an extraperitoneal or low section can be done with little risk to either mother or baby. There is no place in modern obstetrics for traumatic vaginal deliveries. Severe trauma usually results in fetal death and often produces injuries to the birth canal which result in uncontrollable

hemorrhage and spreading pelvic infections. Many of the mothers who survive a traumatic delivery cannot become pregnant again because of distorted pelvic anatomy, and others have such a fear of another pregnancy that they don't even risk it. In recent years a trial of forceps is often done when it is anticipated that vaginal delivery will be difficult. The patient is anesthetized in an operating room, and complete preparations are made for performing a cesarean section. Vaginal examination is done to determine the exact position of the fetal head. When the fetal head is in a transverse or persistent occiput posterior position, rotation is accomplished manually or with forceps. Trials of moderate traction are made, and if vaginal delivery seems too difficult, a cesarean section is performed. Sometimes what promised at first to be a difficult operation turns out to be a relatively easy one, when a trial of forceps is done.

Cesarean section has a definite place in the treatment of prolonged labor. There were 35 (7 per cent) of the cesarean sections done because of prolonged labor (over 30 hours). During the first 24 hours of such a labor, the treatment should be larger supportive—proper rest with morphine, antibiotics to prevent uterine infection, parenteral fluids to combat dehydration and acidosis, and special care to keep the bowels and bladder empty. The membranes should be ruptured when the cervix is half dilated, provided that the presentation is normal and the presenting part is in the pelvis. During the second 24 hours of a prolonged labor, uterine contractions can be stimulated with continuous intravenous injection of diluted Pitocin. This should be done only in nulliparous patients who have faulty labor due to inertia and who have relatively normal pelves. The Pitocin should not be given faster than ½ minim per half hour, and only under the constant supervision of a physician. At the end of 48 hours, the patient should be carefully evaluated, and if labor is not progressing and is unlikely to result in complete cervical dilatation relatively soon, a cesarean section is done. A labor continued longer than 48 hours has an increased fetal mortality from infection and anoxia. Formerly, it was felt that the obstetrician was committed to vaginal delivery if labor had become prolonged. From past experience, it can definitely be said that when these patients were delivered vaginally, many of them suffered severe trauma, especially if the cervix was not completely dilated or retracted, or if the presenting part did not come down into the low pelvis.

There were eight patients who had a section because of a transverse lie of the fetus (1.6 per cent). A transverse presentation of the fetus which cannot be changed by external version is a good indication for cesarean section unless the complication is discovered in the second stage of labor with conditions ideally suited for internal version and extraction. It would seem that in the neglected transverse presentation, when the patient has been in labor for a long time and the fetus usually is dead, abdominal delivery would be preferable to decapitation, which has been the accepted or orthodox method of therapy. Few physicians, even those with extensive practice in obstetrics, have done or could do a decapitation without rupturing the lower uterine segment. In doing a low section for a transverse lie of the fetus, it is advisable to open the lower segment with a midline incision, rather than with the usual transverse one.

Prolapse of the cord furnished an indication for section in four cases (0.8 per cent). When this complication is discovered in the second stage, the patient should be delivered vaginally by whatever method seems expedient for the particular case. However, when it occurs in the first stage, the fetus should be delivered abdominally if there is a reasonable chance of getting the baby out of the uterus alive. Attempts to replace the cord are fruitless and usually result in fetal loss. A classical section might be indicated in a patient with a prolapsed cord when there is need for a rapid delivery of the baby.

Toxemia of pregnancy furnished an indication for eight of the cesarean sections, or 1.6 per cent. All patients who have toxemia of pregnancy, whether it be preeclampsia, or preeclampsia superimposed upon a hypertensive vascular disease, should always be given the benefit of conservative therapy in a hospital before a decision is made to interrupt the pregnancy. A few days on a regimen which includes complete bed rest, a high-protein, low-salt diet, proper sedation and careful regulation of fluids will indicate to the physician which cases of toxemia need to be interrupted, and also will improve the general condition of the patient for either vaginal or abdominal delivery. It has been shown that in those cases which do not markedly improve on conservative therapy, interruption of the pregnancy is better for both mother and baby. If the cervical canal admits a finger and if there is no contraindication because of a high presenting part or an abnormal presentation, the membranes should be ruptured to induce labor. If there is a long latent period before labor is initiated, or if labor becomes desultory or protracted, a cesarean section is indicated. Most of the patients who have toxemia of pregnancy can safely be delivered vaginally, as evidenced by the fact that in 750 cases published by McGuire and Keettel,[5] only in three per cent was cesarean section deemed necessary. All good clinics now recognize that it is important, before interrupting the pregnancy, to treat eclamptic patients conservatively, until convulsions have been controlled for 36 to 48 hours. Most of these can be induced by simple rupture of the membranes, but those who have a long and closed cervix should be delivered by cesarean section.

Six patients with uterine fibroids and four with

ovarian tumors were delivered by cesarean section. Most patients who have uterine fibroids have little trouble during pregnancy and deliver at term without difficulty. Those in whom the fibroids are large or are blocking the birth canal should be delivered by section. If the patient desires future pregnancies, myomectomy should be done at the time of the section. Otherwise, one should undertake cesarean hysterectomy, which gives a smoother convalescence and involves less chance of morbidity and mortality. Ovarian tumors two or more inches in diameter should ideally be removed between the third and fifth months of pregnancy. Patients who have ovarian neoplasms discovered late in pregnancy should be allowed to go to term. If the tumor is not blocking the birth canal or producing an abnormal presentation, vaginal delivery should be anticipated and the ovarian tumor removed later in the puerperium. Patients in whom carcinoma of the cervix is discovered late in pregnancy should have a classical cesarean section at term, under heavy antibiotic protection, leaving the body of the uterus as a receptacle for radium therapy later in the puerperium.

In this, as well as in other published series of cesarean sections, there were some less common indications. A brow presentation which persists during labor, especially in a primigravidous patient, should be delivered by cesarean. A posterior face presentation which does not spontaneously rotate anteriorly during labor should be delivered by cesarean section. Its conversion into an occiput or its anterior rotation manually or by forceps is exceedingly difficult and usually ends in failure, even for the most experienced of obstetric operators. A breech presentation in an elderly primigravida (over 35 years of age) or in any patient having a desultory or protracted labor of 24 hours' duration offers a good indication for section. It takes less pelvic contraction to justify cesarean section if the fetus presents by the breech than by the vertex. A trial of labor cannot be used to determine whether the after-coming head will safely come through a contracted pelvis. Patients whose pregnancies should be terminated and who have breech presentations should have cesarean sections if simple medical induction without rupture of the membranes fails to induce labor. Pregnancy following a difficult but successful repair of a vesicovaginal or a rectovaginal fistula, or an extensive plastic procedure for prolapse or relaxation, usually justifies a cesarean section.

Poliomyelitis, even in its severe form, is not an indication for abdominal delivery, except possibly as a postmortem procedure when there is some chance to obtain a living baby. Patients having considerable respiratory paralysis can be removed from a respirator to permit vaginal delivery by low forceps. Cyclopropane and oxygen can be given under positive pressure, or nitrous oxide and oxygen can similarly be administered in conjunction with infiltration of the vagina and perineum with some local anesthetic. Cardiac patients can usually tolerate a properly conducted vaginal delivery better than a cesarean section. A large hydrocephalic infant should be delivered through the vagina by withdrawing fluid from the ventricles with a large-bore needle inserted into the fetal head through the partially dilated cervix. Following partial collapse of the cranium, the fetal head comes down into the pelvis, the cervix dilates completely, and vaginal delivery is accomplished uneventfully. Patients who have congential abnormalities such as a double uterus or a bicornuate uterus deliver vaginally without difficulty, unless the hypertrophied part which does not contain the pregnancy blocks the birth canal. A cesarean section is never indicated for the sole purpose of performing a tubal ligation. It would be preferable to deliver such a patient vaginally and perform tubal ligation sometime during the puerperium.

MATERNAL MORBIDITY AND MORTALITY

According to the standards established by the American Committee on Maternal Health, only 24.9 per cent of the patients who had cesarean sections were febrile (Table IV). As would be expected, the most common cause of fever was an endometritis (79.6 per cent), which in most cases remained limited to the uterine cavity and produced a mild febrile reaction for only a few days.

TABLE IV

MORBIDITY IN 502 CESAREAN SECTIONS

	No. of Patients	*Per Cent*
None	377	75.1
Endometritis	98	19.5
Urinary tract infection	12	2.4
Parametritis	5	1.0
Perimetritis and peritonitis	4	.8
Pelvic thrombophlebitis*	2	.4
Femoral thrombophlebitis	2	.4
Mastitis	2	.4
Total	502	100.0

* One patient with pelvic thrombophlebitis died from pulmonary embolism.

In five cases, the uterine infection was more virulent and spread to the parametrial tissues. In four others, it spread to the pelvic peritoneal cavity. Most of these severe infections occurred before the year 1946, when penicillin was not generally available for civilian use. There were two cases of femoral thrombophlebitis, and two patients with pelvic thrombophlebitis, one of whom died from pulmonary embolism. The fact that 502 cesarean sections were done with only one maternal death attests to the relative safety of this operation. It is for this reason that we feel that its use should be more widely extended in treating many of the complications of pregnancy and labor that formerly could be safely managed only by vaginal delivery.

PERINATAL MORTALITY

In the entire group of 502 cesarean sections, there were six twin pregnancies (1.1 per cent), making the entire number of babies 508. Four hundred sixty-eight (92.1 per cent) were discharged from the hospital as living and well (Table V). The over-all perinatal mortality was 7.9 per cent, including 14 stillborns (2.8 per cent) and 26 neonatal deaths (5.1 per cent). These

TABLE V

PERINATAL MORTALITY IN 502 CESAREAN SECTIONS

	No. of Babies	*Per Cent*
Living at discharge (6 twins)	468	92.1
Stillborn	14	2.8
Died first day	11	2.2
Died second day	8	1.6
Died after 48 hours	7	1.4
Total	508	100.1

figures do not necessarily reflect the mortality of cesarean sections, for many of the deaths were due to some complication which was associated with pregnancy or which furnished the indication for abdominal delivery. There were 291 cesareans done primarily because of a previous section, and in that group there were five neonatal deaths and one stillborn, giving a perinatal mortality of 2.2 per cent. Those pregnancies were relatively uncomplicated, were usually terminated by an elective cesarean, and were usually full term. If two neonatal deaths due to congenital abnormalities and one stillborn are deleted, there remain no more than three deaths (1.1 per cent) that can be ascribed to the operation itself. Prematurity was an important factor in the neonatal mortality, for 15 out of 26 babies were premature (57.7 per cent); eleven of the prematures were under 2,000 grams. Most of the stillborns were the result of a rupture through an old cesarean-section scar or of a severe toxemia of pregnancy.

SUMMARY AND CONCLUSIONS

1. In a study of 12,925 deliveries from January, 1941, to July, 1954, there were 502 cesarean sections (3.8 per cent).

2. The incidence of cesarean section has increased from 1.26 per cent in 1941 to 5 per cent in 1954. The increased safety of cesarean section has widened the indications for abdominal delivery.

3. The commonest types of cesarean section have been the low cervical (55.7 per cent) and the extraperitoneal (25.9 per cent).

4. The classical section represented only 13 per cent of the abdominal deliveries, and most of them were performed during the earlier years of the study period.

5. Because of the increased safety of cesarean section, the indications for the operation are being extended to include many complications of pregnancy and labor formerly managed by vaginal delivery.

6. The commonest single indication for cesarean section was a previous cesarean section (49 per cent).

7. The cesarean sections done for contracted pelvis represented 16.1 per cent of the total. Many of these could have been eliminated by an adequate trial of labor.

8. There is a definite trend in the use of cesarean section for the treatment of failed forceps, prolonged labor, prolapsed cord, transverse lie of the fetus, placenta praevia and diabetes.

9. Twenty-five per cent of the sections were febrile, usually because of an endometritis.

10. There was only one maternal death from pulmonary embolism. The low maternal mortality attests to the relative safety of cesarean section.

11. The over-all perinatal mortality was 7.9 per cent. There were 291 cesareans done primarily because of a previous cesarean section. The fetal mortality in this group was 2.2 per cent, but when corrected for one stillborn and two congenital abnormalities, it was 1.1 per cent.

REFERENCES

1. Waters, E. G.: Supravesical extraperitoneal cesarean section; presentation of new technic. Am. J. Obst. & Gynec., **39**:423-434, (March) 1940.
2. Kobak, A. J., Fields, C., and Turow, D. D.: Prophylactic chemoantibiotic therapy and low cervical cesarean section in potential and actual infections. Am. J. Obst. & Gynec., **60**:1229-1239, (Dec.) 1950.
3. Kerr, J. M. Munro: Operative obstetrics, 4th edition. Baltimore, Wm. Wood and Company, 1937.
4. Eadie, F. S., and Randall, J. H.: Bleeding in late pregnancy. Review of 131 cases of placenta previa and 104 of abruptio placentae from 1926 to 1952. Obst. & Gynec., **3**:11-18, (Jan.) 1954.
5. McGuire, K. C., Keettel, W. C., and Wieben, E. E.: Toxemia and fetal survival. Obst. & Gynec., **3**:195-200, (Feb.) 1954.

ASSEMBLY IN OTOLARYNGOLOGY

The Department of Otolaryngology, University of Illinois College of Medicine, announces its Annual Assembly in Otolaryngology from September 19 through October 1, 1955. It will consist of two parts.

Part I, September 19 through September 24, 1955, will be devoted to surgical anatomy of the head and neck, fundamental principles of neck surgery and histopathology of the ear, nose and throat. The director for the course will be Maurice F. Snitman, M.D.

Part II, September 26 through October 1, 1955, will be devoted entirely to lectures and panel discussion of advancements in otolaryngology. The chairman will be Emanuel M. Skolnik, M.D.

Registration for one or both weeks is optional. For further information, address the Department of Otolaryngology, University of Illinois College of Medicine, 1853 West Polk Street, Chicago 12.

Radioactive Iodine in the Study of Thyroid Disorders

TITUS C. EVANS, Ph.D.

IOWA CITY

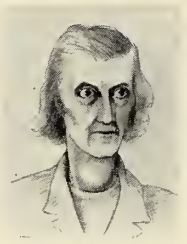
I^{131} HAS BECOME ONE of the most useful of all radioactive isotopes. It emits gamma radiation, the penetrating power of which permits external detection of the radioisotope when it has been introduced into the body. And it also emits beta radiation which, because it can be absorbed locally, has value in therapy and in histologic localization. It decays so rapidly that its amount is reduced by half in eight days.

Because the activities of the thyroid are intimately associated with iodine, I^{131} has become especially useful in studies of that gland. It has been used at SUI since 1948, and the following report is a summary of our experiences over the seven year period.

Since this report is written from the laboratory and investigative viewpoints, the conclusions expressed may not necessarily reflect the views of every member of the rather large study group. One of the chief reasons for the satisfactory progress made in the diagnosis and treatment of thyroid disorders here has been the cooperation of the different departments concerned. All patients suspected of thyroid disease are given the laboratory tests and a physical examination, and their case histories are reviewed. Once a week, each patient is presented at a thyroid conference, of which Dr. Elmer DeGowin, of the Department of Internal Medicine, is chairman. Other members of long standing are Drs. Henry Hamilton and M. Yamamoto (Internal Medicine), Joseph Buckwalter and Edward Mason (Surgery), and H. B. Elkins and I (Radiology and Radiation Research Laboratory). Other staff members have served from time to time, and in addition, the conference usually includes residents, interns, students and visiting physicians. We are continually learning from each other, and from time to time, the general philosophy of the group becomes more solidified in some respects and more fluid in others.

Although many cases of hyper- or hypo- thyroidism may properly be diagnosed from the history and physical signs, puzzling ones appear with enough frequency to make it worthwhile to have supplementary laboratory data. The usual association of the clinical picture with results of three commonly used laboratory tests can be seen in Figure 1. The patient's basal metabolic rate (BMR), the result of one of the oldest and most generally available tests, is obtainable within a day or two, but because it is subject to many variables, it is generally considered the least reliable of the three findings on which we rely. In some instances, however, as when we are trying to determine the effectiveness of thyroid administration for hypothyroid condition or to judge thyroid status in a patient "flooded" with stable iodine, it is the most useful.

The level of thyroxine in the blood is indicated by the chemical determination of protein bound iodine (PBI) of the plasma. Because the concentration is very low, the test requires considerable technical skill, and any contact with extraneous iodine may be enough to alter the results of the



HYPERTHYROID



EUTHYROID



HYPOTHYROID

	B.M.R.	P.B.I. μg%	I^{131} 4 hrs.	Uptake 24 hrs.
low	+25	10	50	60
av.	+35	12	60	70
high	+50	17	90	90
low	−10	4	10	20
av.	0	6	15	25
high	+10	8	20	30
low	−40	0.3	0	0
av.	−30	2.0	2	5
high	−20	3.0	5	10

Figure 1. Usual laboratory findings in clinically hyperthyroid, euthyroid and hypothyroid patients.

Dr. Evans is a staff member in the Radiation Research Laboratory and the Department of Radiology at the State University of Iowa.

determination. Results of the test are in doubt if the patient has received stable iodine in any form, but especially so if he has been given colloids containing iodine, such as are used in certain radiographic technics.

One of the most satisfactory tests is that which determines the rate of radioactive iodine absorption by the thyroid gland (Figure 2). In urgent cases, severe hyperthyroidism may be indicated by an unusually high uptake within an hour. Each tracer dose is measured for the amount of radioactivity before it is used. Then, usually, the patient takes a tracer dose (10-30 μc.) of I^{131} in about 30 cc. of water by mouth, and washes it down with several drinks of water. Measurements are then made over the thyroid at 4 hours and again at 24 hours. More frequent readings are taken if indicated, and, where possible, measurements are continued for several days to determine the rate at which the radioiodine is utilized in producing thyroxine. This "turnover" rate is reflected by the measured rate of decay of the I^{131} (the "effective half-life") when corrected by comparison with the rate of physical decay (the "physical half-life"). The effective half-life of I^{131} in the gland is usually almost the same as the physical half-life, but in hyperthyroid patients it is shorter (less than six days, and in some instances a matter of only a few hours). The uptake measurement is made at a great enough distance and with a large enough opening in the shield to permit radiation from the entire gland to enter the counter. The detector generally is a bismuth-coated cathode Geiger tube in a lead housing, for it has been found to give very consistent results. The more sensitive scintillation counter is used when it has been advisable to give the patient only extremely small tracer doses.

In addition to these studies, each patient is measured for relative radioactivity of each of the two lateral lobes and the isthmus by means of a directional counter placed, in turn, directly over each area. For several years, excretion studies were made as an additional test, since the state of thyroid activity is also reflected in the amount of radioactivity excreted in the urine over a 24-48 hour period. But the results of the uptake studies over the thyroid gland were so generally satisfactory and so much more consistent that in recent years excretion studies have been done only in special instances. Some investigators advocate the use of a clearance test in which multiple measurements are made over the thyroid gland at frequent intervals (usually hourly) to yield an indication of the rate at which the thyroid gland is removing iodine from the blood. This has been done in special cases with our patients, but in general we have found that measurement at 4 hours and at 24 is adequate and allows us time to study more patients. Radioiodine conversion ratios have also been suggested by investigators as being a more direct indication of the rate of thyroxine production. The test to which they refer consists of a chemical separation of the protein bound and non-protein bound radioiodine from a sample of blood drawn 24 hours after administration of radioiodine. The greater the percentage of the total radioiodine in the blood, as represented by the protein bound fraction, the greater the rate of conversion of inorganic to

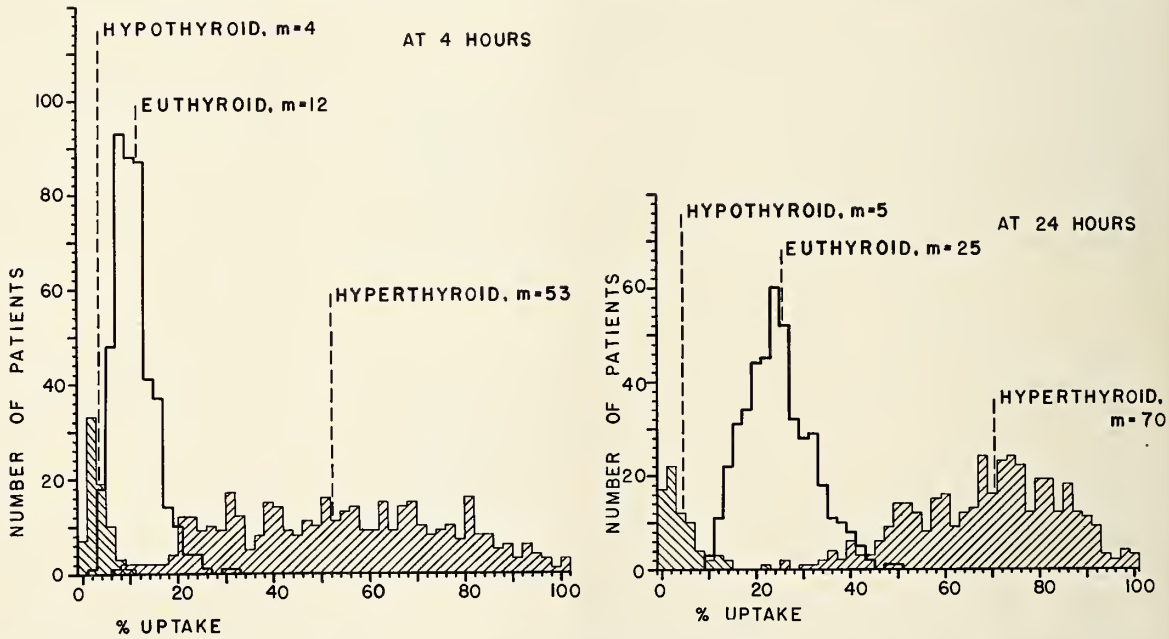


Figure 2. Frequency distribution of I^{131} uptake values at 4 hours (left-hand chart) and at 24 hours (right-hand chart) after administration of the tracer dose. It will be seen that the three conditions of thyroid function can be separated or distinguished within 4 hours, but the separation is much more distinct at 24 hours. The indicated means are based upon 63 hypothyroid, 446 euthyroid and 362 hyperthyroid cases. The standard error of each mean is less than 2 per cent.

organic iodine and the higher the rate of thyroxin production. Because this method is more time consuming and requires the administration of much more radioiodine to the patient, we have usually done only the 4 and 24 hour uptake studies.

It is generally recognized that if the patient has had stable iodine in any form, it will interfere with the radioiodine and PBI determinations. Lugol's solution and other inorganic forms of iodine may disappear from the blood very rapidly in hyperthyroid individuals, but the time required before iodine uptake and PBI values become trustworthy will also vary with the quantity of stable iodine administered and the duration of treatment. Radiographic studies which utilize iodine interfere with the studies temporarily, and the colloidal form interferes with radioiodine and PBI determinations for many months. Likewise, antithyroid medication affects the evaluation of radioiodine studies. The degree of depression of I^{131} uptake is related to the amount of medication, the duration of its administration and the extent to which its toxicity has been controlled.

The radioiodine uptake rate is a reflection of the rate of thyroxin production. The number of pairs of shoes sold by a shoemaker ordinarily is reflected in the rate at which he buys leather. But it is possible that at times the rate of procurement does not indicate the rate at which he is producing the finished product. This may be the case either when storage is exceeding manufacture, or when the supply of raw material is insufficient to meet the requirements of both storage and manufacture. On this analogy we can explain in simple terms some of the interpretations placed on I^{131} uptake findings under certain unusual conditions. The tissues of the body act as the "consumer" of the thyroxin, or finished product. The thyrotropic hormone (TSH) of the pituitary acts as the "salesman" or "distributor" who stimulates its acceptance. In certain cases of hypothyroidism this condition may be secondary to a lack of pituitary TSH, and one can give the hormone for a few days to see whether it will stimulate an increase in I^{131} uptake.

In stages of thyroiditis where the gland is degenerating, the uptake of I^{131} is very low and the PBI value is high. If treatment of the thyroiditis (by x-irradiation, for example) succeeds in restoring thyroid function and in reducing inflammation, there is a prompt return to usual radioiodine uptake values, as is shown in Figure 3. In a few instances, the radioiodine uptake values have been elevated, whereas the other tests have given results in the euthyroid range. This condition is usually associated with iodine deprivation due to insufficient iodine in the diet or to a previous ingestion of goitergenic compounds. If propylthiouracil or Tapazole is administered for a few days, the gland will become hyperplastic, it will be unable to manufacture thyroxine and its follicles will become devoid of colloid. Within a few days after treatment is stopped, the cells of the follicles will resume their usual shape, and new colloid will be formed. During this phase, the radioiodine uptake values will be high, although the BMR and PBI values remain within the usual limits. Prolonged

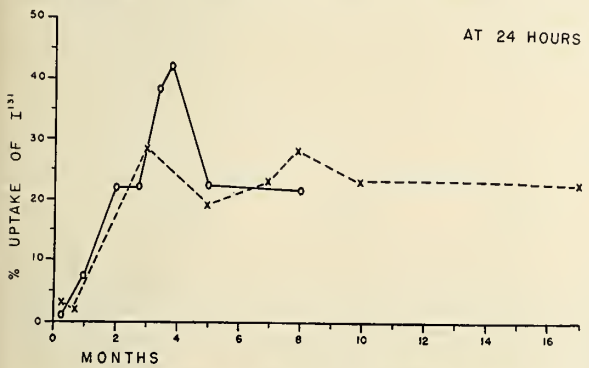


Figure 3. I^{131} uptake values of two patients with acute thyroiditis (0 time) and at intervals following therapy (x-irradiation).

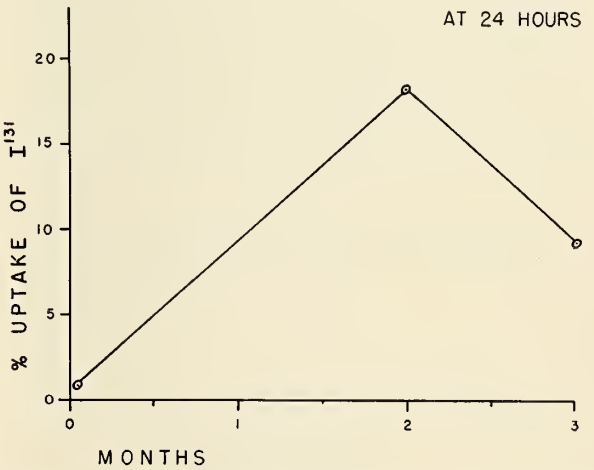


Figure 4. Radioiodine uptake values of a euthyroid individual within a few days after cessation of thyroid-extract administration (0 time) and again at 2 months and at 3 months without thyroid extract.

administration of thyroid extract depresses the secretion of TSH by the pituitary, and lack of stimulation during an extended period apparently results in atrophy of the thyroid. In a few instances, patients receiving thyroid extract have been taken off the medication, and the resultant regeneration of the thyroid has been reflected in a return of the radioiodine uptake to euthyroid levels (Figure 4).

TREATMENT OF HYPERTHYROIDISM

Inasmuch as the hyperthyroid gland, or overactive parts of a thyroid gland, are producing thyroxine at an elevated rate, radioiodine will accumulate at an accelerated rate, resulting in an almost ideal condition for therapy with radioiodine. The only prerequisite for delivery of a therapeutic dose of radioiodine to the tissue is a sufficient concentration of the radioactive material.

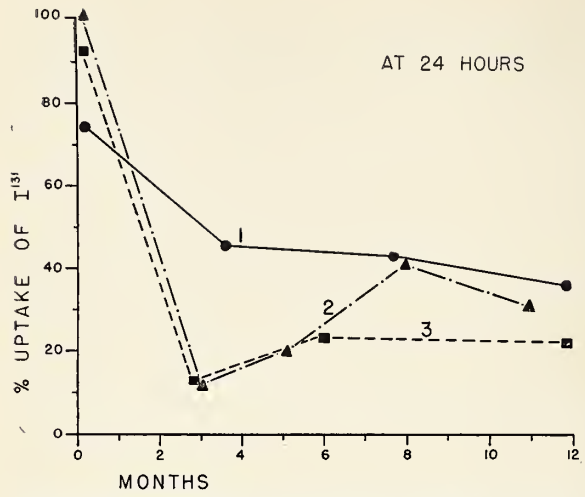


Figure 5. Three cases of hyperthyroidism treated with I^{131} selected to show variation in response to the therapy. These cases received satisfactory results from a single dose. It can be seen that the patient shown in curve (1) responded slowly but steadily to a dose of 3.5 mc. The patient represented in curve (2) responded rapidly to a dose of 6.6 mc., and at three months the uptake was in the hypothyroid range. This effect was only temporary, and the ensuing values were in the high euthyroid range. The patient represented by curve (3) was given a dose of 5 mc. The radioiodine uptake values reached a low at three months and then returned to usual euthyroid levels. Symptomatic relief from toxicity usually preceded the laboratory indications by a few weeks, but when temporary hypothyroidism was produced, the increase in I^{131} uptake usually preceded the improvement in the clinical findings.

The patients who are most frequently accepted for radioiodine therapy are those who have small, diffuse, hyperactive glands. Patients for whom surgery is usually suggested are those with large, nodular and toxic glands, very young individuals and those with solitary thyroid nodules. Radioiodine therapy is also contraindicated if the patient is pregnant. But these criteria are always subject to modification, depending upon circumstances, and when necessary, it has been found that any case of hyperthyroidism can be treated successfully with radioiodine. Of course the lower the iodine uptake and the more irregular its distribution in the gland, the more time and treatment are required to control the disease. But other things being equal, radioiodine treatment has been found to be convenient, effective, relatively inexpensive and devoid of some of the complications associated with other forms of treatment. The only possible objections to radioiodine therapy are (1) that there is usually a lapse of several weeks or months before the toxicity is controlled, and (2) that occasionally a patient may become temporarily or permanently hypothyroid. These two drawbacks, however, are also inherent in other methods of therapy. Three types of response are shown in Figure 5.

Radioiodine dosage is calculated on the basis of the concentration of the radioiodine in microcuries per gram of tissue, the distribution of the radioiodine in the gland, the severity of the disease, and the presence of complicating factors such as exophthalmous, heart disease, diabetes, etc. Large,

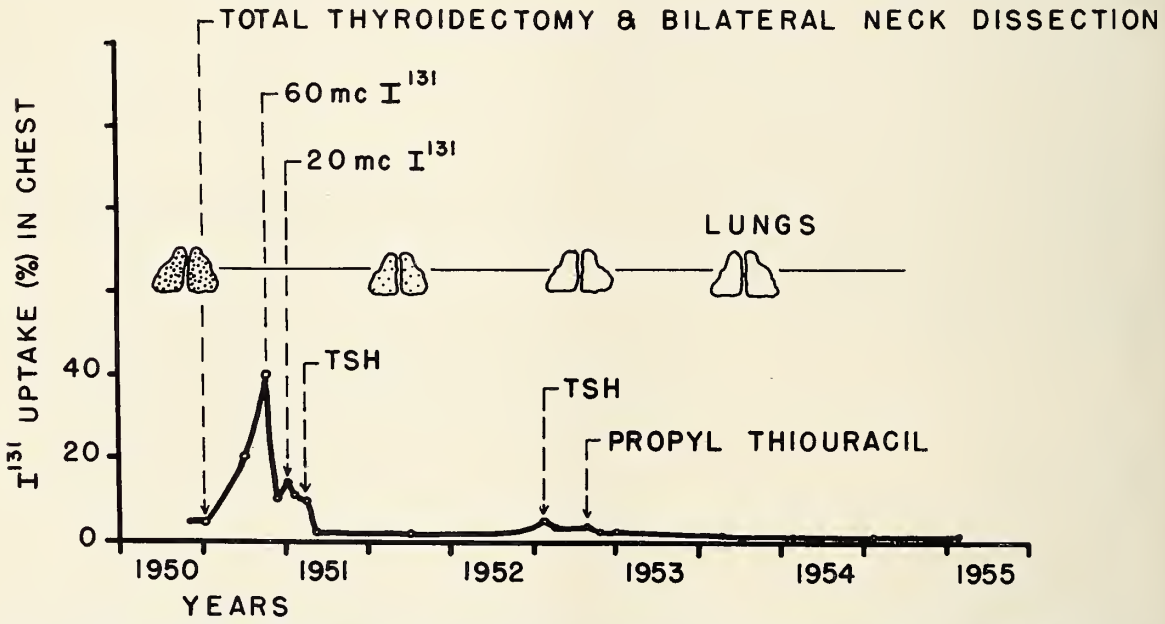


Figure 6. Results of radioiodine therapy of thyroid carcinoma. Surveys before surgery indicated usual uptake in the thyroid region, with only very slight uptake in the lung mestastases. Histopathologic examination revealed the carcinoma to be mostly papillary, but with some follicle formation. A few of the follicles accumulated radioiodine, as indicated from radioautographic studies. Within a few months after removal of the thyroid, the metastases in the lungs accumulated radioiodine to a satisfactory degree, and I^{131} therapy was then instituted. Within a year, the iodine-accumulating cells were destroyed, and attempts to stimulate further activity with TSH and with propylthiouracil were fruitless. Consequently, therapy was discontinued. As the patient has become myxedematous, thyroid extract is administered except when radioiodine tests are done (twice a year) to determine whether further treatment is necessary. So far, there have been no indications, either from radioiodine studies or from clinical findings, that carcinoma persists.

multinodular glands require much higher doses and more frequent treatment than do smaller and relatively diffuse glands. If I^{131} therapy is instituted within a few months after surgical extirpation of part of the gland, the initial dose is usually very small, for it has been found that in such cases the glands are extremely radiosensitive.

Study and Treatment of Thyroid Carcinoma

Although results of radioiodine studies are not considered an altogether reliable means of determining the presence or absence of thyroid carcinoma, they are helpful. Patients suspected of having a thyroid carcinoma are surveyed very carefully over the thyroid region, over the lateral neck, and over the shoulder, spine and chest. Solitary nodules that have less uptake than adjacent areas in the thyroid are suspected of being thyroid carcinomas. Outside of the usual thyroid region, any nodules or lumps that have some uptake are also suspected of being thyroid carcinomas. An uptake occurring in the left upper region, above the usual location of the thyroid, possibly indicates a persistent and functioning pyramidal lobe, rather than a carcinoma.

All cases of suspected thyroid carcinoma are subjected to surgical examination, and diagnosis is based on the histopathologic study. If an operation is to be performed on the thyroid gland, the patient is given a tracer dose of radioiodine sometime between 10 and 24 hours before surgery. At the time of surgery, a member of the laboratory staff is available with detection equipment so that the surgeon may find out at once whether certain tissue has concentrated the radioiodine. Following removal of tissue suspected of being thyroid carcinoma, some of it is preserved, sectioned, imbedded and mounted on photographic plates. Upon development, after an exposure of several days, the photographic emulsion turns dark if it has been exposed to radiation from the radioiodine. In this way the "autograph" reveals the histologic localization or iodine-concentrating ability of the tissue. It is usually found that if functioning thyroid tissue is present, carcinomatous areas do not take up large amounts of the radioiodine. Therefore negative surveys and a negative autograph do not, necessarily, contraindicate radioidine therapy.

In some cases of thyroid carcinoma, it is practically impossible for the surgeon to remove all of the neoplastic tissue. Such cases are given a short course of radioiodine following surgery, so as to destroy any of the persistent normal thyroid as well as any of the carcinomatous tissue that remains functioning at that time. In the absence of the thyroid, the pituitary may be stimulated to produce larger amouts of TSH and thus to cause the carcinomatous cells to differentiate and to function in taking up radioiodine. If, after several weeks of thyroid deprivation, the patient is definitely myxedematous and shows that he is not taking up radioiodine, he is then given thyroid extract to maintain his normal metabolic activity.

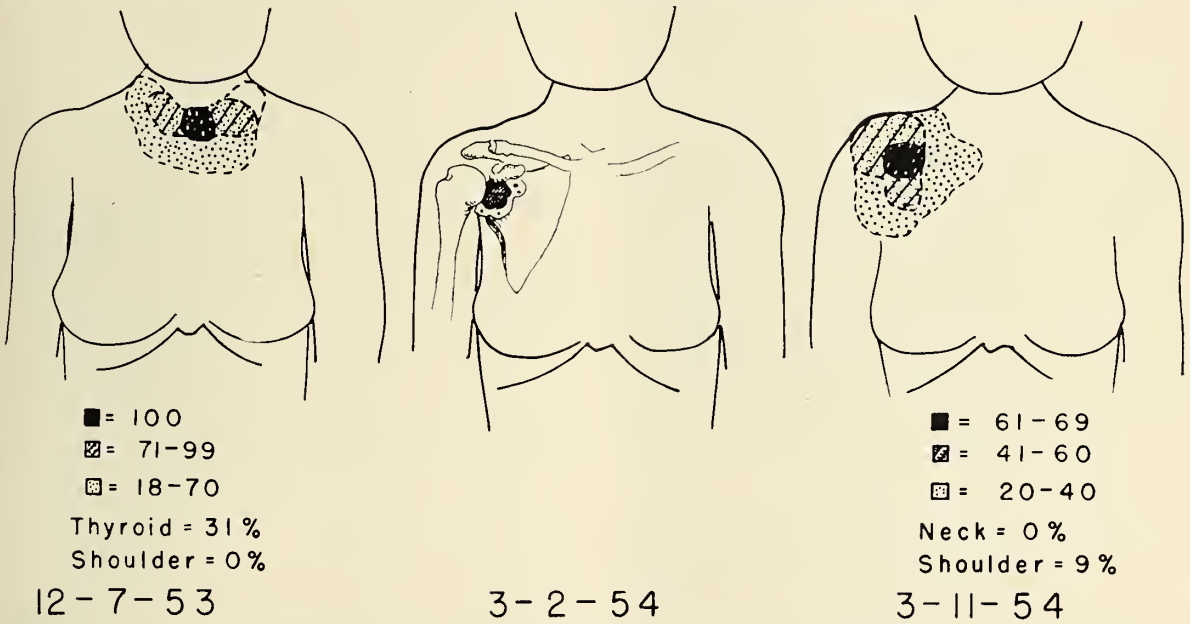


Figure 7. A case of carcinoma of the thyroid with metastasis to a shoulder. The patient had a painful and disabling lesion of the right shoulder. A diagram of the radiographic findings is shown in the middle drawing. Before surgical extirpation of the gland, the uptake of administered I^{131} was only in the thyroid region and not in the shoulder. Three months after removal of the thyroid, the carcinoma in the shoulder region showed considerable ability to accumulate radioiodine. This result, like that in Figure 6, is apparently a response to removal of the thyroid gland. Apparently, when the thyroid is removed, the functioning ability (and perhaps differentiation) of the carcinoma is stimulated by unusual amounts of TSH from the pituitary. This patient is now undergoing I^{131} therapy, has received marked relief of pain and is again able to use the arm freely. However, the lesion has not as yet been destroyed, as is indicated by both radiographic and radioiodine uptake studies.

Then, at six-month intervals or otherwise as indicated, he is taken off thyroid extract for a two-week period and then tested again with radioiodine. If, at any time, the radioiodine uptake test indicates the presence of functioning cells, radioiodine therapy is instituted for as long as is necessary. The patient is then allowed again to take thyroid extract and is checked at regular intervals of from six months to a year. Two selected cases are illustrated in Figures 6 and 7. It is well to point out that in many cases surgical removal is all that is necessary, and that in many instances when further treatment is required, X-ray therapy is the method of choice.

In summary, it may be said that the results of our seven-year study indicate that the use of radioiodine in the diagnosis of thyroid disorders and in the treatment of hyperthyroidism is very satisfactory. Further study will help us in evaluating the laboratory findings in unusual thyroid disorders and in understanding how thyroid activity is affected by changes in the other endocrine glands. The use of radioiodine in the diagnosis and treatment of thyroid carcinoma is still in the investigative stage.

REFERENCES

1. Corrigan, K. E., and Hayden, H. S.: Diagnostic studies with radioactive isotope tracers. Radiology, **59**:1-17, (July) 1952.

2. Dobyns, B.M., and Maloof, F.: Study and treatment of 119 cases of carcinoma of the thyroid with radioactive iodine. J. Clin. Endocrinol., **11**:1323-1360, (Nov.) 1951.

3. Evans, T. C.: Preparation of radioautographs of thyroid tumors for study at high magnification. Radiology, **49**:206-213, (Aug.) 1947.

4. Evans, T. C.: Applications of atomic energy in medical research. Tr. Am. Acad. Ophth., pp. 88-98, (Nov.-Dec.) 1948.

5. Evans, T. C., and McGinn, W. E., Jr.: Method of preparing radioautographs with adjacent sections. Cancer Research, **13**:661-665, (Sept.) 1953.

6. Frantz, V. K., Quimby, E. H., and Evans, T. C.: Radioactive iodine studies of functional thyroid carcinoma. Radiology, **51**:532-551, (Oct.) 1948.

7. Hamilton, J. G.: Use of radioactive tracers in biology and medicine. Radiology, **39**:541-572, (Nov.) 1942.

8. Hunt, H. B.: Some aspects of thyroid disease. IV. Radioiodine in evaluation and treatment of hyperthyroidism. Texas J. Med., **46**:805-808, (Nov.) 1950.

9. Miller, E. R., and Sheline, G. E.: Studies with radioiodine. III. Problem of dosage in the treatment of hyperthyroidism. Radiology, **57**:720-728, (Nov.) 1951.

10. Panel Discussion: Diseases of the thyroid gland and their management. J. Omaha Mid-West Clin. Soc., **14**:96-117, (Aug.) 1953.

11. Quimby, E. H., Werner, S. C., and Schmidt, C.: Influence of age, sex and season upon radioiodine uptake by the human thyroid. Proc. Soc. Exp. Biol. & Med., **75**:537-540, (Nov.) 1950.

12. Schmidt, C. E., and Nadelhaft, J.: Effective half life of radioactive iodine (I^{131}) in the hyperthyroid gland. Its significance in treatment of thyrotoxicosis. Lab. Invest., **2**:133-139, (Mar.-Apr.) 1953.

13. Werner, S. C., Quimby, E. H., and Schmidt, C.: Radioactive iodine, I^{131}, in the treatment of hyperthyroidism. Am. J. Med., **7**:731-740, (Dec.) 1949.

14. Werner, S. C., Hamilton, H. B., Leifer, E., and Goodwin, L. D.: Appraisal of the radioiodine tracer technic as a clinical procedure in the diagnosis of thyroid disorders; uptake measurement directly over gland and note on use of thyrotropin (TSH). J. Clin. Endocrinol., **10**:1054-1076, (Sept.) 1950.

15. Werner, S. C., Hamilton, H., and Nemeth, M. R.: Graves disease: hyperthyroidism or hyperpituitarism? J. Clin. Endocrinol., **12**:1561-1571, (Dec.) 1952.

Coming Meetings

In State

April 6	Neurology for the Practitioner, SUI, Iowa City
April 13-14	Annual Meeting, Iowa Tuberculosis and Health Ass'n., Des Moines
April 24-27	Annual Meeting, Iowa State Medical Society, Des Moines
May 19	Heart Symposium, Iowa Academy of General Practice, Des Moines
Sept. 15-16	Annual Meeting, Iowa Academy of General Practice, Des Moines
Oct. 13-14	Joint Meeting, Mississippi Valley and Iowa Trudeau Societies, Des Moines

Out of State

April 4-8	Ophthalmology and Otolaryngology, U. of Kansas School of Medicine, Kansas City
April 4-15	Pediatrics, Cook Co. Grad. Sch. Med., Chicago
April 11	Gallbladder Surgery (10 day course) Cook Co. Grad Sch. Med., Chicago
April 11-13	Chest Diseases, U. of Kansas School of Medicine, Kansas City
April 11-13	Anesthesiology, U. of Kansas School of Medicine, Kansas City
April 11-13	Radiology for general physicians, U. of Minn. Continuation Center, Minneapolis
April 14-15	Gastroenterology, U. of Kansas School of Medicine, Kansas City
April 14-16	Gynecology for general practitioners, U. of Minn. Continuation Center, Minneapolis
April 18-20	Allergy and chest diseases for general practitioners. U. of Minn. Continuation Center, Minneapolis
April 18-29	Gynecology. Cook Co. Grad. Sch. Med., Chicago
April 18-29	Urology, Cook Co. Grad. Sch. Med., Chicago
April 19-22	Symposium on Medicine and Surgery, Mayo Clinic, Rochester
April 25-May 6	Clinical Uses of Radio Isotopes, Cook Co. Grad. Sch. Med., Chicago
April 25-May 6	General Surgery, Cook Co. Grad. Sch. Med., Chicago

The Cross-Eyed Child

ALSON E. BRALEY, M.D., and H. M. BURIAN, M.D.

IOWA CITY

FINDING THAT THEIR child has an eye that deviates inward, outward or upward is one of the most distressing occurrences in the life of a young couple. The child's appearance is often disfigured by such a misalignment of the eyes, and the remarks of relatives and friends may point up the cosmetic blemish, even if the parents attempt to overlook it. If the misalignment is allowed to persist until the child acquires playmates or goes to school, it may cause him a severe psychologic trauma.

Luckily, we no longer have to wait until the child is old enough to become conscious of the defect. No child is too young to have treatment in one form or another for a neuromuscular anomaly of the eyes, and to emphasize that point is the principal purpose of this article.

Choosing the proper form of treatment in a given case is a matter for the ophthalmologist, but every practicing physician should know that a child should have a competent examination of his eyes as soon as a misalignment has been discovered. The child's age makes no difference. The physician should also know the points on which the ophthalmologist seeks information when he examines such a child, and the therapeutic means which he has at his disposal for restoring the alignment and proper functioning of the child's eyes.

CAUSES

A deviation of the visual lines in a young child may have various causes. It may be the result of a paralysis of one or more of the extraocular muscles. But such cases are relatively rare. The majority of cases of strabismus are patients who do not have such a paralysis or in whom a paralysis plays only a minor role. In most of them, the deviation is due either to anatomical or innervational factors, or to a combination of both.

The mechanical anomalies may reside in the size and shape of the orbits and of their contents and in abnormalities of the tendons, attachments and check-ligaments of the muscles. But even when present, these are of minor importance.

The innervational factors play the most important role in the etiology of the so-called comitant deviations. The best known factors are those which have to do with the functions of convergence and divergence. A strong tonic convergence impulse is present in all young children. In time, it gradually decreases in power and remains more or less stable in the adult until the presbyopic age. The prevalence of the tonic convergence impulse is one of the reasons why an acquired strabismus in a child is usually convergent, whereas it is divergent in the adult.

Another important component of the convergence function is the so-called accommodative convergence. Whenever we look at an object at near vision range, we must accommodate in order to see it clearly, and this accommodation is coupled with an impulse to converge our eyes on the object of regard so that the visual lines intersect in it. The result is a clear and single appearance of the object looked at. Now to fixate an object at close range, a person who is farsighted and has no corrective lenses must make a greater accommodative effort than does an emmetropic person. As a consequence, there will also be excessive convergence. Vice versa, an uncorrected myope needs to exert less accommodation under those circumstances, or none at all, and in contrast with that of an emmetropic subject, his convergence will be insufficiently stimulated. Excessive or deficient accommodative convergence can be shown to exist in a very large number of squinting children.

In addition to these relatively simple innervational causative factors which may be said to be more or less directly ocular in origin, there are also some more deepseated and widespread disturbances of the central nervous system which may be the ultimate cause of a squint in a child.

Whatever the ultimate cause may be, a manifest, obvious misalignment of the visual axes will not appear unless there is a disturbance of the so-called fusion mechanism, which keeps the eyes properly aligned. Many minor degrees of misalignment are kept in check by the fusion mechanism. Without it, there would hardly be a person with straight eyes. In the last analysis, then, a comitant strabismus is the result of an imbalance between the forces which tend to keep the eyes aligned and the forces which tend to produce a deviation. It is apparent that because such an imbalance may be a constitutional trait, it may be hereditary.

Once a misalignment has established itself, not only is there a disfigurement of the individual, but the deviation has also a profound influence on the squinting patient's act of seeing. In order to avoid the confusion and double vision which are the immediate result of the misalignment, the patient excludes from his consciousness (suppresses)

Dr. Braley and Dr. Burian are members of the staff in ophthalmology at the SUI College of Medicine.

the images reaching the deviated eye. The suppression may become so deep that the deviated eye actually loses much of its central vision, developing a so-called amblyopia ex anopsia. Nevertheless, every squinting person uses both eyes together to some extent. But in so doing, he may develop faulty habits of binocular vision which may become so deeply ingrained, if allowed to persist too long, that the restoration of normal binocular vision may be difficult or even impossible.

In order to treat his patient rationally, the ophthalmologist will want to establish insofar as possible the nature of the patient's condition and will want to find out what damage, if any, has been done by the presence of the deviation.

A remarkable amount of information can be obtained even from the examination of an infant. Of course, one cannot expect to obtain answers to subjective tests, but one can estimate with a fair amount of accuracy the angle of squint and observe its possible variability. By measuring and evaluating the refractive error, one can ascertain whether one eye is constantly deviated or whether there is alternation. A large refractive error indicates the probable presence of a significant accommodative factor. A decidedly monocular deviation is presumptive evidence that unless treatment is instituted the eye will later have an amblyopia ex anopsia, if it hasn't one already. As the child grows older, one can gather further information to round out the picture, but the absence of this added information is no reason for neglecting the patient and waiting before taking therapeutic measures.

NON-SURGICAL THERAPY

The therapy of comitant strabismus is both non-surgical and surgical. In past decades when the cosmetic result was the main goal, the emphasis was on the surgical therapy. Today, the goal has been set more broadly, and we attempt in every case to achieve not only a cosmetic but also a functional result. The non-surgical treatment is consequently coming to the fore. This does not mean necessarily that less surgery is being done or should be done. It does mean that, generally, the age of the patient when surgery is performed is lower than it used to be, and that more attention is being given to the child's obtaining good vision in each eye and proper binocular cooperation before he is operated upon. Thus, after surgery the child is ready to use his eyes together correctly, and he may eventually obtain normal binocular vision. If necessary, this development can be assisted by postoperative non-surgical treatment.

In the small child, the non-surgical treatment consists essentially of the prescription of spectacles and of occlusion treatment. The wearing of spectacles, even in an infant, is of greatest importance if there is a significant refractive error. It serves to normalize the all-important accommodation-convergence relationship, and actually represents sufficient treatment in almost one-third of the cases of convergent strabismus. If the prescription and the wearing of glasses are delayed, it may become considerably more difficult to obtain a good functional result by simple means. The wearing of glasses is also of importance in that the better image created on the retina by the lenses acts as a stimulus to better vision.

By occlusion treatment, I mean the wearing of a patch over one eye. This simple procedure—though for the patient and the parents it is often unpleasant—is an excellent means of treatment, for it fulfills two tasks. It prevents or cures an amblyopia ex anopsia by forcing the child to use one eye at a time, and it prevents the child from using the two eyes together while their axes deviate, thus preventing the development of faulty visual habits.

As the child grows somewhat older, more active forms of therapy may be employed, consisting first of home exercises directed at the development of good fixation and normal vision in each eye. Somewhat later, orthoptic training proper is usually added. This training, given both in the office and through home exercises, aims at combatting suppression and at re-educating the patient in binocular vision. It will, if successful, establish a harmonious cooperation of the eyes in their ordinary, everyday use.

SURGERY

In a large number of cases, it is finally decided that the child should be operated upon. In each case it is up to the individual ophthalmologist to determine which is the most desirable time for surgery, but, as has been stated, the present trend is toward operating upon the young child, rather than upon the older one. The straightening of a child's eyes at an early age has the advantage that it will enable him sooner to acquire proper binocular cooperation through normal use of his eyes. On the other hand, the ophthalmologist may prefer to wait, delaying the operation until he has gathered enough information to permit his predicting the final result of surgery with reasonable assurance. He will also have to take into account the normal changes in the relative positions of the eyes which occur during the years of growth and which generally result in more divergent positions of the eyes, because of the reduction in tonic convergence, on the one hand, and of the increase in interpupillary distance and the direction of growth of the orbits, on the other hand. Generally speaking, ophthalmologists are inclined to operate earlier on cross-eyed children who have a large deviation and small hyperopia, than on children who have a relatively small angle of squint. Especially in those children who have a high degree of hyperopia, they will probably want to delay

surgery for some time. As a rule, children who have a divergent strabismus are surgical cases from the start.

The surgeon must decide whether to weaken the action of a certain muscle or muscles, whether to strengthen their antagonists or whether to combine those two procedures. The choice will depend as much on the surgeon's preference as on the situation of the individual case. However, in every surgical procedure for a comitant deviation of the eyes, the goal should be not only to reduce or abolish the angle of squint, but also to restore or maintain the smooth, coordinated functioning of all the extraocular muscles after surgery.

The task is not completed after successful surgery. To insure the establishment of normal cooperation of the two eyes in the act of binocular vision, it is necessary to supervise the patient closely. As a rule, if the attainment of a functional goal appears to be feasible and desirable, further non-surgical treatment is necessary, often for a long period, until secure fusion is established. Such treatment is also required where it appears practical to let the child dispense with the spectacles.

Great strides have been made in the handling of the cross-eyed child. It is hoped, for the future, that early, rational treatment will materially reduce the number of people who go through life with poor vision in one eye due to an amblyopia ex anopsia or who are excluded from the benefits of normal, comfortable binocular vision. Among the different ophthalmologists the details of the therapeutic procedures vary greatly, but there is unanimity on the point that early treatment of the cross-eyed child is essential.

The pediatrician and the family physician can help greatly in reducing the visual handicap resulting from the misalignment of the visual axes if they are on the lookout for those conditions and if they encourage the parents of such children to seek advice as soon as the condition has been noted.

Protecting Private Water Supplies

ROBERT L. MORRIS, M.S.

IOWA CITY

The transmission of various disease-producing organisms through water supplies certainly is no longer news, for it has been reported and authenticated repeatedly in the literature. And our municipalities have done a sufficiently good job in water treatment, in general sanitation and in control of known carriers so that the incidence of typhoid, diarrhea-enteritis and dysenteries has been reduced to a remarkably low figure. Indeed, during the past 20 years, none of the outbreaks of typhoid in Iowa have been traced to public water supplies.

But the same high level of safety does not exist with respect to the private wells in this state, for approximately 50 per cent of the samples from such sources that are submitted to the State Hygenic Laboratory for analysis are found "unsafe."

Because, at the present time, there are no suitable laboratory procedures for specific determination of disease-producing organisms in water, the coliform group is used as an index to the sanitary qualities of the samples submitted. Because the critical water-bourne pathogens are enteric, the presence of coliform organisms, which abound in the intestinal tracts of man and other warm-blooded animals, is indicative of sewage contamination of water supply. Since those bacteria are relatively non-pathogenic, in looking for them the bacteriologist may seem to have adopted a roundabout procedure, but specific analysis for pathogens in a water supply is impractical because of the relatively small numbers of them to be found in a reasonable sized sample. Also, even though the pathogenic organisms might have been transmitted by the water supply in question, they might no longer exist when the sample was taken. It is obvious, therefore, that the real value of laboratory control in this situation is one of preventive medicine, rather than of diagnosis. If coliform organisms are isolated from a water supply, there is a possibility that the supply transmits enteric pathogens at least from time to time.

For specific isolation and identification of Salmonella typhi (typhoid bacillus), some membrane filter technics allowing the use of samples as large as ten liters have recently been developed and show considerable promise. In the future, it is quite possible that we may be able to use them successfully for specific identification not only of S. typhi but also of other pathogens.

COMMONEST CAUSE OF POLLUTION

Shallow rural wells and those deeper wells having constructional defects are most subject to pol-

Mr. Morris is an assistant professor in the Department of Hygiene and Preventive Medicine and principal chemist at the State Hygienic Laboratory, at SUI. He wishes to acknowledge the assistance of I. H. Borts, M.D., director of the Laboratory, in the preparation of this paper.

lution. The commonest cause of pollution is surface seepage through inadequate well platforms and perforated well casings in the upper 20-30 feet. Polluted water from privies and barnyards, by running over and percolating through the porous upper soil strata, establishes the transmission chain. Proper construction of private wells to exclude this surface seepage, and subsequent disinfection with chlorine-liberating compounds usually results in a coliform-free supply. Information on the proper construction and disinfection of private wells may be obtained from the Division of Public Health Engineering, Iowa State Department of Health, Des Moines 19.

EXCESS NITRATES

Cyanosis or methemoglobinemia in infants, caused by excessive nitrates in rural Iowa wells, is a problem that continues to merit increased attention. Since 1948, there have been 4 deaths actually attributed to high nitrate in well water, and 18 deaths of children less than one year in which nitrate cyanosis was suspected of being the cause. In many additional instances, water samples have been submitted to this laboratory for nitrate analysis following illnesses suggesting methemoglobinemia, but not reported as such. Three cases of nitrate cyanosis, resulting in one fatality, were reported to this laboratory in the first two months of 1955.

Comly[2] reported in 1945 that nitrate nitrogen above ten parts per million in water used to prepare bottle formula apparently is converted to nitrite by the infant's intestinal flora and reacts with hemoglobin-forming methemoglobin to produce cyanosis.

NEED FOR REPEAT TESTING

The incidence of excessive nitrates in Iowa rural wells is significant and often occurs simultaneously with surface pollution, in which coliform organisms, together, presumably, with accompanying pathogens, get into the water from human or animal excreta.[3] Fertilization of soil with nitrate-bearing compounds is also a contributing factor. The nitrate nitrogen content of improperly constructed wells varies seasonally, being highest following periods of surface run-off. Water samples taken during dry periods often test "satisfactory," with little or no nitrate and coliform organisms, whereas samples from the same well taken following heavy rains or thaws will frequently show high coliform density and excessive nitrates. Water supplies can be considered really "satisfactory" only after being evaluated during both dry and run-off periods. Certainly rural well supplies should be adequately sampled preceding their use as a formula diluent.

Water sample containers can be obtained from the State Hygenic Laboratory on request. A charge of $2.00 per sample is assessed, payable upon submission of the specimen. Only samples submitted in containers specially prepared and sent out by the laboratory will be accepted for analysis. The bacterial quality and the nitrate level will be determined and a report, bearing a stamped interpretation, will be mailed back to the sender.

The entire process requires approximately five days after receipt of the sample by the laboratory. Emergency nitrate determinations for diagnostic purposes can be performed in approximately two hours. In such emergencies, examination for nitrate only will be performed on specimens brought to the laboratory in chemically clean glass bottles or pint jars. Nitrate analysis thus determined should be confirmed at once by submission of a second sample in one of our specially prepared containers. Where infant cyanosis is evident or suspected, water for infant formula should be obtained from an approved municipal supply until a nitrate-free well supply can be located in the immediate vicinity.

INSECTICIDES AND WEED KILLERS

The use of insecticides and weed control compounds has become widespread in agricultural areas. Numerous cases of contamination of wells by these complex poisons have come to our attention as the result of requests for analytical service. Except in a few cases, precise and accurate methods do not exist for determining trace amounts of these compounds in water. One should make every effort to prevent their entry into the water supply, rather than depend on detection and decontamination procedures.

Wells impervious to surface pollution as regards nitrates and bacteria are also resistant to contamination from fertilizers, insecticides and weed-control agents distributed for surface control. Connecting mixing vessels for dilution of these products directly to a well tap has resulted in several cases of back siphonage and serious contamination of farm wells. In view of the scarcity of low-level toxicological data on many of these compounds, there is no intelligent thing to do other than to abandon a well that is known or is suspected to have been contaminated with these chemicals.

INDUSTRIAL WASTES

Increasing emphasis on industrialization in Iowa has given rise to several instances of suspected contamination of wells by industrial wastes. Some of the contaminants involved have been fluoride, chromium, nitrates, arsenic, trinitrotoluene, trichloroethylene, petroleum products and phenolic compounds. Adequate analytical methods exist for determining the presence of most of those substances, but experience has taught that well abandonment is often the only safe procedure after such contamination. When contemplating the discharge of obnoxious or toxic wastes, managers of industrial

plants should consider the eventual or long-term effect on the ground water supply of the area.

Because of the alleged reduction in dental caries rate when an optimum fluoride content of 1.0-1.5 parts per million is maintained in drinking water, the fluoride-ion level of water supplies has recently received considerable attention. Many of Iowa's private water supplies exceed this desired figure, as do some of its municipal supplies. But there is evidence to support the belief that fluoride levels as high as 6.0 parts per million produce no adverse physiologic effects other than dental fluorosis,[4] and there is no published evidence to the contrary. Most of the high-fluoride wells occur in central Iowa counties.

The education of Iowa's rural population as to the hazards involved in an unsafe well-water supply has somewhat improved the over-all situation. The facilities for the detection of these unsafe supplies exist, and adequate corrective measures are available. But the problem is to persuade the people to use them effectively.

BIBLIOGRAPHY

1. Borts, I. H.: Water-bourne diseases. Am. J. Pub. Health, **39**:974-978, (Aug.) 1949.
2. Comly, H. H.: Cyanosis in infants caused by nitrates in well water. J.A.M.A., **129**:112-116, (Sept. 8) 1945.
3. Johnson, G.: Nitrate levels in water from rural Iowa wells. Preliminary report. J. Iowa M. Soc., **36**:4-7, (Jan.) 1946.
4. Report of the Water Fluoridation Committee of the St. Louis Medical Society. Missouri Med., **51**:124-142, (Feb.) 1954.

Slipped Capital Femoral Epiphysis

MICHAEL BONFIGLIO, M.D.

IOWA CITY

One of the commonest causes of *preventable* hip disability in adolescents is slipping of the capital femoral epiphysis. It is usually characterized by a gradual displacement of the capital femoral epiphysis on the neck through the epiphyseal plate. At times, a complete separation of the epiphysis is observed following acute trauma.

The pathogensis of upper femoral epiphyseal displacement is not completely understood. Three factors probably combine in the development of the displacement: mechanical, traumatic and metabolic. In an adolescent, the upper femoral epiphysis is particularly susceptible to any shearing or rotary stresses placed on it because of its anatomical position with reference to the neck. If the patient is obese, the stresses on the epiphyseal plate are greatly increased.

It has long been supposed that an endocrine factor was present in patients with slipped epiphysis. The average age of onset of the disease in the two sexes tends to confirm that idea, and in addition, patients with this difficulty usually have had a prepubertal rapid growth spurt. Presumably there is an imbalance of the growth hormone—sex hormone ratio in favor of the growth hormone. Harris has observed that in rats, the shearing strength of the epiphyseal cartilage is decreased after administration of growth hormone, so that less force is required to displace an epiphysis. Administration of estrogen protects the epiphysis from shearing stress. Patients with delayed epiphyseal closure as a result of disturbance of the pituitary growth factor frequently develop slipped capital femoral epiphysis, and in such patients, a wide epiphyseal plate persists into adult life.



Figure 1. Typical overweight 14-year-old boy. Note left lower extremity in external rotation.

Dr. Bonfiglio is a staff member in the Department of Orthopedic Surgery at the SUI College of Medicine.

Ponseti has recently produced epiphyseal lesions in growing rats fed a 50 per cent sweet pea diet. The changes were noted in the epiphyseal plate between the zone of proliferating cartilage cells and the zone of provisional calcification. A disruption of the epiphyseal cartilage, with slipping, was observed in all epiphyses, including the capital femoral epiphysis. His findings help to explain the pathogenesis of slipped upper femoral epiphysis.

AGE, SEX AND BODY BUILD

The symptoms have their onset in youngsters from 10-16 years old, the average age for boys being 14 years, and for girls, 12 years. These are the ages at which the prepubertal extremity growth spurt takes place. Boys are affected about three times as frequently as girls. These children are usually overweight for their age and height (Figure 1). In a study of 85 cases, Wilson found 70 per cent obese, 13 per cent of average build and 6 per cent tall and slender. The remainder he did not classify. About 25 to 40 per cent of the patients develop bilateral slipping of the epiphysis.[4]

Patients with this disorder can be classified into three groups for purposes of discussion of symptoms.

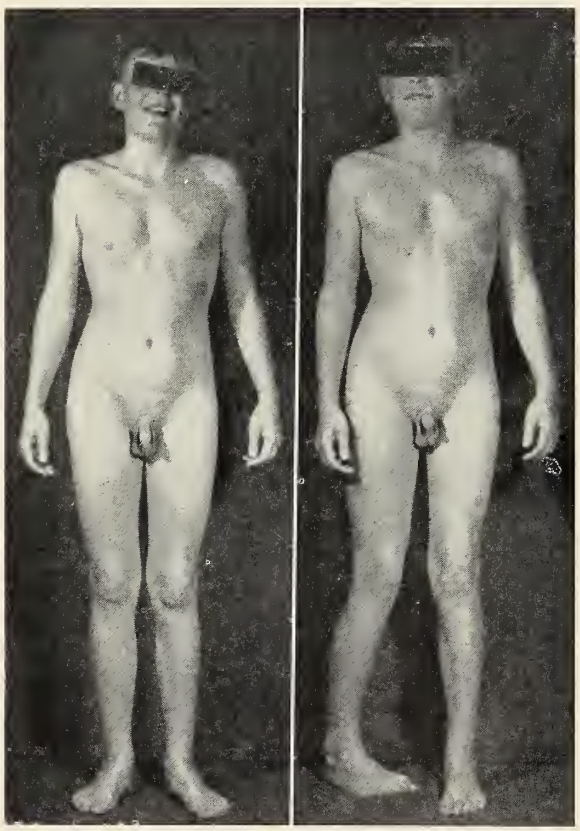


Figure 2 Restriction of internal rotation, 13-year-old boy.

MINIMAL DISPLACEMENT

About a third to a half of the patients are first seen when the slipping of the epiphysis is less than a centimeter. The symptoms are insidious in onset. The patient may have intermittent limp of the involved extremity, along with pain in the hip or thigh, anteriorly. This pain, when present, is worse on exertion. Often the pain is present in the knee only, and the diagnosis may be delayed by the physician's failing to note that the hip pain is referred to the knee. Indeed, in many cases the diagnosis is missed, and the patient is treated for knee strain, rheumatism or flat feet. The most frequent physical finding at this stage is restriction of internal rotation of the hip (Figure 2). On flexion of the hip, with the knee at a right angle, the thigh rotates externally (Figure 3). These signs may be present even though no obvious slipping has occurred. Synovitis in the hip joint was consistently found in patients with so-called "preslipping" (Howorth).

Line drawings of roentgenograms in the minimal slipping stage show widening and fuzziness of the epiphyseal plate (Figure 4A). The lateral roentgenogram is most useful for showing anterior displacement of the neck and downward displacement of the femoral head (Figure 4B). In this stage, the results of treatment are most favorable, but although rest in bed does bring about improvement in symptoms and hip function, the continuation of slipping by external rotation of the thigh may not be prevented. Similarly, the use of a Thomas caliper, non-weight bearing brace may not prevent further slipping.

The aim of treatment is to prevent further slipping and to effect the closure of the epiphyseal plate, either by immobilization in a hip spica plaster bandage or by internal fixation of the femoral head with a Smith-Peterson nail or with threaded stainless-steel pins (Figure 4C). To help relieve muscle spasm, gentle skin traction, with internal rotation in bed, may be used temporarily, until surgery or immobilization can be done. If plaster immobilization is used, the affected limp is placed in wide abduction and internal rotation to relieve the shearing stress from the epiphysis. The opposite thigh is also abducted in the plaster bandage to prevent tilting of the pelvis. From three to nine months, or an average of six months, is required for closure of the epiphyseal plate.[5]

Caring for a patient during immobilization imposes a tremendous burden on hospital personnel and an even greater one on a family. The advantages of internal fixation and non-weight bearing with crutches are consequently obvious. Hip and knee function can be maintained without restriction, and the patient is ambulatory and can attend school as usual.

Since bilateral disease is so frequent, it is important that the patient be observed at intervals

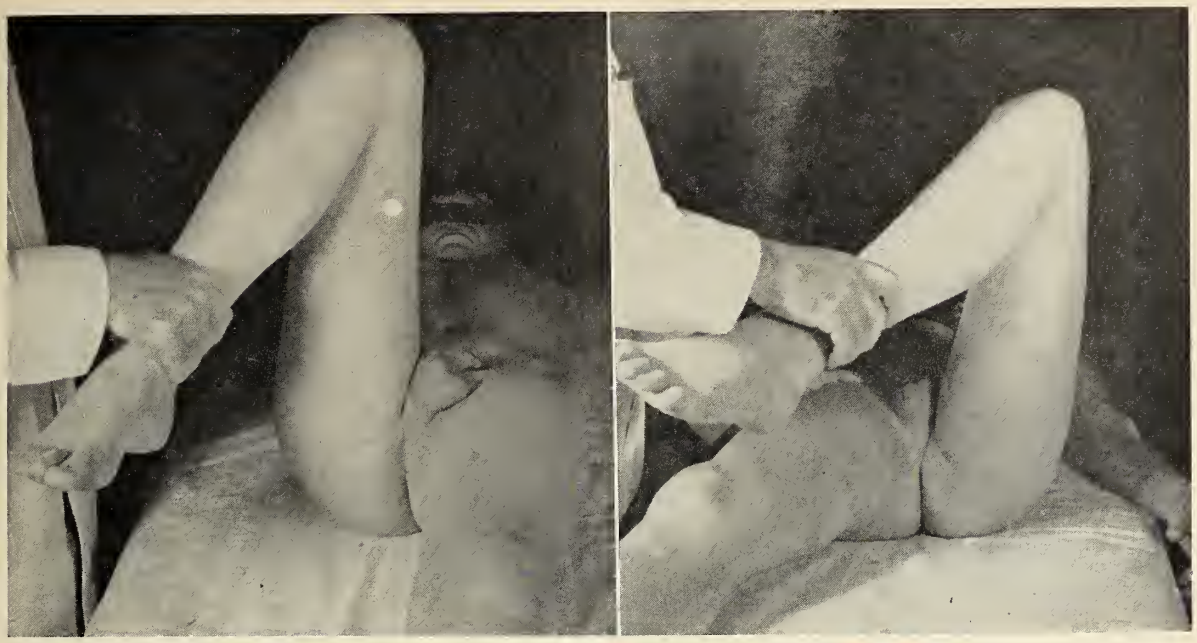


Figure 3. External rotation of left hip on flexion of the hip with knee at right angle.

of three to six months until epiphyseal closure of both hips has occurred. In fact, the patient should be instructed to return immediately if symptoms develop in the previously unaffected hip. Full weight bearing is permitted as soon as there is roentgenographic evidence of fusion of the head and neck. The epiphysis of the greater trochanter will close at the same time and can be used as an indicator where slight deformity prevents visualization of the neck epiphyseal plate.

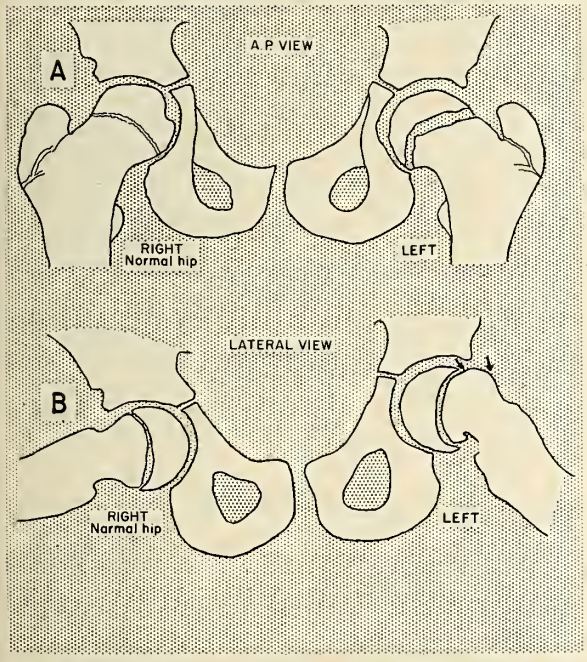


Figure 4A,B. Minimal slipped epiphysis, 13-year-old boy.

MODERATE TO SEVERE SLIPPING

Usually the patient's symptoms are more pronounced. Persistent limp and increasing deformity are the commonest complaints. Pain, when present on walking or running, is relieved by rest. An occasional patient may never have pain, in spite of a severe slipping. The physical findings are as noted above, but of greater degree. In addition, up to an inch of shortening in the extremity and a slightly positive Trendelenberg sign are present. The roentgenograms show more displacement of the epiphysis. There is proliferation of new bone at the inferior margin of the head and neck. The neck of the femur projects anteriorly and blocks motion as it impinges upon the margin of the acetabulum.

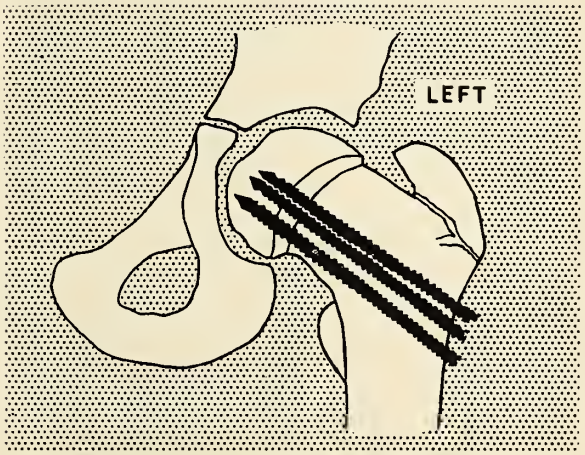


Figure 4C. Same patient, postoperative, showing *in situ* insertion of threaded pins.

If the slipping is more than one third of the width of the head, one may accept the deformity and fix the head *in situ*. Usually, some remodelling of the projecting beak of femoral neck occurs. Restriction of hip motion, especially flexion, internal rotation and abduction, is to be expected; however, satisfactory function is present for a number of years. Eventually in such a hip, arthritic changes can be expected at an earlier age than they would otherwise occur. Such is more certain to be the case if the degree of slipping is more than half the width of the head (Figure 5A,B).

Restoring anatomical position and preventing further displacement, which are the purposes of treatment in these patients, can be achieved by replacement of the head at the site of displacement or by subtrochanteric osteotomy. If the osteotomy is done at the epiphyseal plate, it may be necessary to remove a wedge of bone from the neck to permit replacement of the head (Figure 5C,D). Klein has advocated a curved osteotomy through the epiphyseal plate. In either case, the epiphysis is fixed with a Smith-Peterson nail or threaded wires. Postoperatively, the patient is more comfortable in balanced suspension traction, with the limb in abduction, or short leg plaster bandages with an abduction bar between. In three or four weeks, the patient is permitted to walk with crutches, non-weight bearing on the operated side. Protection from weight bearing is continued until there is roentgenographic evidence of bony union between the head and neck. Because the blood supply to the femoral head is mainly from vessels along the neck of the femur, one risks disturbing the circulation by the above procedures. Aseptic necrosis may then be a complicating factor. This will be indicated in the roentgenograms by a difference in the density of the femoral head and the surrounding bone. The head maintains its origin density while the surrounding bone undergoes atrophy from disuse and decreases in density. In such cases, the patient must be protected from weight bearing until revascularization of the femoral head takes place—often up to 18 months longer. The necrotic femoral head may be treated by drilling and by the insertion of tibial bone grafts to aid revascularization and prevent collapse of the head. The incidence of this complication prior to 1942 averaged about 13 per cent. In recent years, by paying more meticulous attention to the circulation of the hip, Compere and Klein have reduced that incidence.

Subtrochanteric or intertrochanteric osteotomy is performed in those patients in whom the slip is of long standing or in whom closure of the epiphyseal plate has already occurred. If no internal fixation is used, the patient is immobilized in plaster for about three months postoperatively.

ACUTE SLIPPING OF THE EPIPHYSIS

Acute slipping is the result of sudden trauma in a normal child or in a patient with previous minimal slipping. Pain and marked deformity are prominent features of this type of case. The patient refuses to walk on the extremity. The limb lies in external rotation, and movements are considerably more restricted, not only because of the deformity but because of painful spasm of the hip muscles. The roentgenograms demonstrate the medial and posterior displacement of the femoral head. The usual proliferation of the inferior margin of the neck and head is missing (Figure 6A,B). The patient should be treated as an emergency, and the use of a Thomas splint for transportation is recommended. Seven to twelve pounds of Buck's extension traction, with internal rotation, is applied on admission to the hospital. Manipulation and traction under anesthesia usually complete the reduction prior to internal fixation (Figure 6C,D). The traction must be gentle if one is to avoid further damage to the circulation of the femoral head. If the separation is more than four weeks old, traction and manipulation are not usually successful. Open reduction must then be done. Necrosis of the epiphysis is more common in patients with acute slipped epiphysis, whether treated by closed or open reduction.

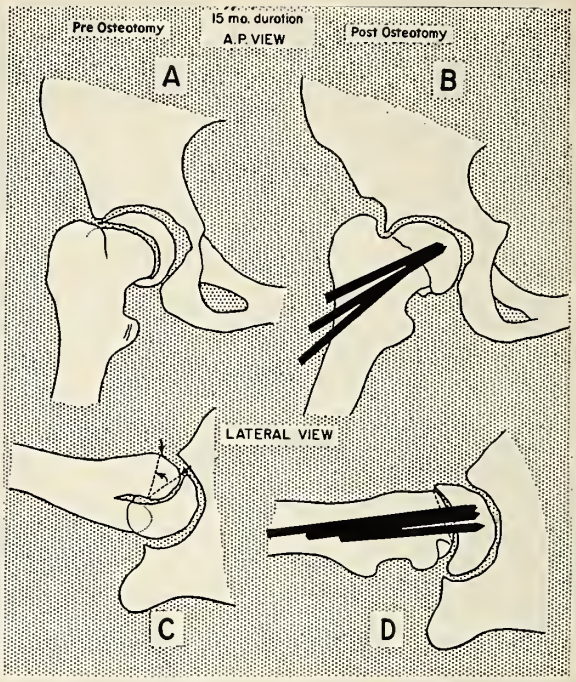


Figure 5. Slipped epiphysis of 15 months' duration in an 11-year-old girl.

COMPLICATIONS

Persistent minimal to moderate deformity of the head and neck is the most frequent complication. The average amount of shortening of the extremity is about ¾ inches. During the patient's early adult life, little functional impairment will be observable, but he is predisposed to a degenerative arthritis of the hip as a late sequela. Dur-

ing the treatment for minimal to severe slipping, in an occasional patient, progressive loss of motion and fibrous ankylosis of the joint occurs. The degree of slipping seems to have little bearing on this development. The result is a severely crippled hip which may require arthroplasty. The cause of this type of arthritis is not fully understood. Epiphyseal necrosis may occur naturally when there has been moderate displacement or when there has been complete separation due to sudden trauma. The risk of aseptic necrosis after open reduction by epiphyseal or wedge osteotomy has been discussed.

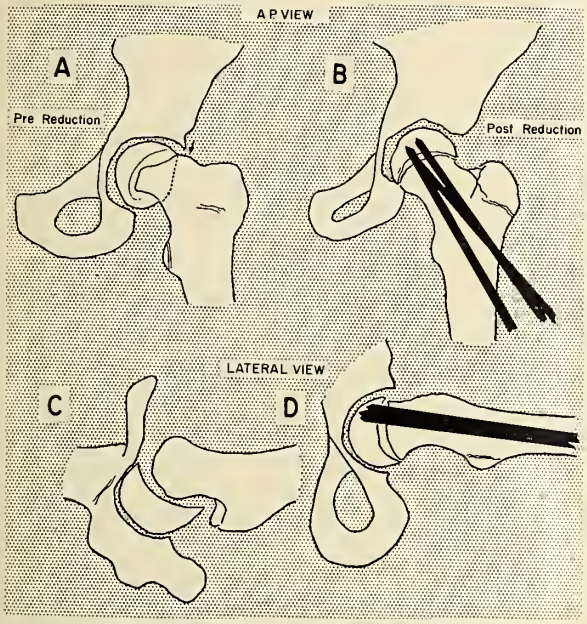


Figure 6. Acute slipped epiphysis, 11-year-old girl.

In summary, slipped capital femoral epiphysis, when recognized and treated early during the minimal slipping stage, carries an excellent prognosis. All efforts should be made toward early recognition of this disorder.

REFERENCES

1. Compere, C. L.: Correction of deformity and prevention of aseptic necrosis in late cases of slipped femoral epiphysis. J. Bone & Joint Surg., **32-A**:351-362, (April) 1950.
2. Harris, W. R.: Endocrine basis for slipping of upper femoral epiphysis. Experimental study. J. Bone & Joint Surg., **32-B**:5-11, (Feb.) 1950.
3. Key, J. A.: Epiphyseal coxa vara or displacement of capital epiphysis of the femur in adolescence. J. Bone & Joint Surg., **8**:53-117, (Jan.) 1926.
4. Klein, A., Joplin, R. J., Reidy, J. A., and Hanelin, J.: Roentgenographic changes in nailed slipped capital femoral epiphysis. J. Bone & Joint Surg., **31-A**:1-22, (Jan.) 1949.
5. Moore, R. D.: Conservative management of adolescent slipping of the capital femoral epiphysis. Surg. Gynec. & Obst., **80**:324-332, (Mar.) 1945.
6. Ponseti, I., and Barta, C. K.: Evaluation of treatment of slipping of capital femoral epiphysis. Surg. Gynec. & Obst., **86**:87-97, (Jan.) 1948.
7. Wilson, P. D.: "Slipping epiphysis." In: Orthopedic Surgery, ed. by R. K. Ghormley. New York, Thomas Nelson & Sons, 1938, pp. 320-328.
8. Ponseti, I. V., and Shepard, R. S.: Lesions of the skeleton and other mesodermal tissues in rats fed sweet pea (*Lathyrus odoratus*) seeds. J. Bone & Joint Surg., **36-A**:1031-1058, (Oct.) 1954.

PESTICIDE COMMITTEE ISSUES WARNING

The Committee on Pesticides of the AMA Council on Pharmacy and Chemistry has learned of misleading advertising claims that are being made by firms selling electric devices that disseminate chlorophenothane (DDT) or lindane into rooms for the purpose of killing insects.

As regards the toxicity of the vaporized drugs, the committee made one report[1] in May, 1952, and another[2] in July, 1953. Its most recent warning[3] is principally concerned with the danger of children's ingesting the tablets or crystals that are provided by the manufacturer to be fed into the machine. "Ingestion of about 0.5 Gm. of lindane in pellet form produced convulsions in an 18-month-old child," the Committee relates. "Four children were also seriously poisoned after drinking unspecified quantities of a homemade soft drink sweetened with lindane-contaminated sugar."

The physiological effects of lindane upon human beings are as yet inadequately understood, the Committee says. It has been commercially exploited as a comparatively safe insecticide on the grounds that it is eliminated fairly promptly from the animal body and is stored no more than minimally in fat tissues. But it has been discovered recently that significant amounts are stored in the brains of laboratory animals, and that in relatively high doses it may induce profound and long-lasting effects on the central nervous system.

In summary, the Committee declares: "Insecticidal poisons that are effective because of deliberate, continuous pollution of the atmosphere have questionable safety. Their use in this manner is contrary to hygienic standards for safe atmospheric living and working conditions. The Committee wishes not only to reaffirm its opposition to the home use of continuously operating devices (insecticide vaporizers) but also to re-emphasize its warning that extreme care is required in the intermittent use of such equipment promoted as so-called insecticide fumigators."

1. "The Health Hazards of Electric Vaporizing Devices for Insecticides," J.A.M.A., **149**:367, (May 23) 1952.
2. "Health Problems of Vaporizing and Fumigating Devices for Insecticides," J.A.M.A., **152**:1232, (July 25) 1953.
3. "Abuse of Insecticide Fumigating Devices," J.A.M.A., **156**:607, (Oct. 9) 1954.

PHYSICAL MEDICINE MEETING

The Midwestern Section of the American Congress of Physical Medicine will meet at the Mayo Memorial Building, in Minneapolis, on May 6, 1955. Registration will be at 8:30 a.m., and there is to be no fee.

In addition to scientific papers, there will be a tour of the new physical medicine and rehabilitation facilities in the building. Interested physicians are invited to write Dr. D. M. Paul, 515 Ronalds Street, Iowa City, for further information.

State University of Iowa College of Medicine

Clinical Pathologic Conference

January 5, 1955

SUMMARY OF CLINICAL FINDINGS

A 17-YEAR-OLD WHITE male arrived at University Hospitals so seriously ill that he was scarcely able to answer questions. Details of his history were obtained from his parents. His only previous illnesses had been measles and mumps. He was single and had been employed at a bakery, where he had worked steadily during the six months prior to his illness. One week before admission, he complained of pain in his calves and weakness in his legs. There was no headache, neck stiffness or fever. He was originally advised to rest at home, and was given vitamin therapy. Three days later, a consultant was called because his condition had progressed. The second physician advised hospitalization and reported his clinical findings as including (1) absence of ankle and knee jerk reflexes, (2) zero response to plantar stimulation, bilaterally, (3) reduction of light touch sensation in the legs, (4) estimated 50 per cent strength in the legs, and (5) reduced rectal sphincter tone. In his review of laboratory tests, the consultant said that on lumbar puncture there was no interference with the flow of spinal fluid; it was clear and colorless; there were no cells; the total protein value was 66 mg. per 100 cc.; and the sugar value was 85 mg. per 100 cc. He said that X-ray films of the chest were reported normal, as were films of the lumbar spine. Because of the spread of involvement to the arms, the patient was transferred to University Hospitals.

The boy's body temperature did not reach a level higher than 99.4°F. during his stay in this Hospital. The pulse rate was originally 100 per minute, and the blood pressure was 140/100 mm. Hg. The respiratory rate was 24 per minute on arrival. Except for a distended urinary bladder, the general physical findings were within normal limits. He was conscious and alert. His pupils reacted well to light; his ocular rotations were full; and his ocular fundi were normal. There was a bilateral and symmetrical facial weakness of the lower motor-neurone type. His voice was husky, and he had difficulty in swallowing. He was unable to raise his head from the bed, his arms were very weak, a condition which was more severe in the proximal muscles than in the distal ones, and his abdominal musculature was weak. There was essentially no voluntary motion of his voluntary extremities. The deep tendon reflexes were absent throughout, and the response to plantar stimulation was zero bilaterally. The sensory loss involved proprioceptive sensation more than superficial, and was more evident in the distal portions of the extremities than in the proximal.

Examination of the urine showed no albumin, sugar or blood. Serologic tests on the blood were negative for syphilis. The hemoglobin value was 15 Gm. per 100 ml., the erythrocyte count was 6,000,000 per cu. mm., and the white blood cell count was 14,050 per cu. mm. Study of the peripheral smear showed 68 per cent segmented polys, no eosinophils, 24 lymphocytes and 8 monocytes. The sedimentation rate was 7 mm. in one hour. Special tests for eastern and western equine encephalitis, St. Louis encephalitis, lymphocytic choriomeningitis and mumps were all negative. A chest film taken on a portable X-ray apparatus shortly after admission was reported normal. The spinal fluid again showed no pleocytosis, but the protein had now risen to 89 mg. per 100 ml. Studies of the urine for porphyrins, arsenic, mercury and lead were negative. The values for the following tests are listed: urea nitrogen 23 mg. per 100 ml., creatinine 1.0 mg., carbon dioxide combining power 17.9 mEq., chlorides 106.9 mEq., sodium 140 mEq., potassium 5.4 mEq. An electrocardiogram was reported normal.

The patient was given cortisone, 50 mg. four times daily. Frequent suction of the nasopharynx was necessary, and nasal oxygen was used for a time. Because of the rapid progression of the illness, he was placed in a respirator and a tracheotomy was performed. The blood pressure had risen to 240/140 mm. Hg., the pulse to 115 per minute, and the respiratory rate to 30 per minute before this move was accomplished. Death occurred in the respirator ten days after the onset of the illness.

CLINICAL DISCUSSION

Dr. Adolph L. Sahs, Neurology: The case for discussion today is a fulminating disease which struck a previously healthy boy of 17, and within three days he was rather seriously involved. There is no definite history of a preceding infection. Three days after the onset he had considerable neurologic involvement, as evidenced by the report from his consulting physician to the effect that his ankle and knee jerk reflexes were absent, that there was a reduction of sensation in his legs, a reduction in his strength and a disturbance of his rectal sphincter tone. You will note from the last part of that doctor's report that the spinal fluid contained no cells and that the total protein

value had reached 66 mg. per 100 cc. There was no evidence of a neoplasm in this young man.

During his stay in the hospital here, he was afebrile, but I feel that the pulse rate of 100 per minute was significant. As we go down through the second paragraph of the protocol, we see evidence of a severe, symmetrical type of polyneuritis or radiculoneuritis, with involvement of some of the cranial nerves, particularly the seventh. This combination sometimes leads us to say "polyneuritis with facial diplegia." Laboratory studies were not significant, except that by the time of the second puncture the spinal fluid protein had risen to 89 mg. per 100 cc. Special studies for certain infections were carried out, but the results were normal. Tests for possible toxic agents such as the porphyrins, arsenic, mercury and lead were negative. It is almost impossible to cover everything in the diagnostic category. To have made the protocol complete, we should have had smears of the nasopharynx for diphtheria. The rapidity of the patient's decline after his arrival here and the serious complications which appeared with respect to the bulbo-respiratory mechanisms are outstanding. He died in a respirator ten days after the onset of his illness.

Dr. George C. Albright, Iowa City physician: Was there any headache or diplopia?

Dr. Sahs: There was no headache, and there was no diplopia in this instance. The pupils reacted well, the rotations were full, and the fundi were normal. Now I might mention that sometimes we do see involvement of the other cranial nerves, particularly the rotators of the eyes and the second nerves. We may encounter an optic neuritis in this disorder.

Dr. Jack Davies, Anatomy: What would you say, Dr. Sahs, regarding the clinical diagnosis and the immediate cause of death?

Dr. Sahs: The clinical diagnosis was multiple neuritis of the Guillain-Barré type. It is very difficult to say precisely why these people die in the respirator. The respirations become weak and finally fail to the point where one must use artificial means, supplemented usually by a tracheotomy and suction. Then the pulse rate rises, and sometimes the temperature rises too. The pulse becomes increasingly rapid until it reaches the rate of 120, 130 or 140, and then the heart stops. It is my own feeling that the same process which affects the nerves elsewhere has something to do with the nervous mechanisms of the heart, but I have no good way of proving that I am right.

Resident: What time of the year did this man acquire the disease?

Dr. Sahs: November 30, 1953.

Dr. Frederic W. Stamler, Pathology: The autopsy findings were consistent with the diagnosis which Dr. Sahs has given—the Guillain-Barré type of polyneuritis, or whatever you prefer to call the condition. I should like briefly to discuss the findings which have been reported in a review of 50 recent cases of this entity collected and studied at the Armed Forces Institute of Pathology.* It is, perhaps, the most complete pathologic and anatomical discussion of the disease that has appeared. In that study are included all of the various sub groups under the one heading: Landry-Guillain-Barré syndrome. The authors prefer to retain that name because they feel that no etiological classification has been established, despite the fact that in their series two out of their fifty cases developed during the course of infectious mononucleosis, and six other cases had their onset in illnesses suggestive of infectious mononucleosis. Clinically, their cases had a duration of from 3 to 77 days, and the lesions found in the nervous system depended upon the duration of the disease as well as on the severity and type of symptomatology that were observed clinically. The authors felt that the lesions all were similar in their essence.

The first change was edema of the nerve roots and peripheral nerves, and it was found within the first three or four days. Next came myelin degeneration and degeneration of the axis cylinders of the peripheral nerves. After about nine or ten days, there was lymphocytic infiltration of the nerve roots, which was thought to be secondary to the degenerative changes that had occurred, rather than a primary inflammatory process. The infiltration was quickly followed by the appearance of macrophages which phagocytized the degenerated material in the involved nerves. In the severe cases of long duration, these lesions progressed to a stage in which the nerves were described as being completely devastated. Lesions within the brain were inconstant and not pathognomonic. Edema and some minor degree of hemorrhage or ischemic degeneration might be found. Within the spinal cord there were no consistent changes, although in a few cases there were some degenerative changes of the anterior horn cells and some chromatolysis. In the more severe advanced cases there were myelin degeneration and phagocytic reaction of the involved areas of the cord, as well as of the peripheral nerves. It was decided that the lesion began either in the nerve roots or peripherally, and that the changes within the cord were secondary.

Now the particular lesions in our case of ten days' duration fit rather nicely with the findings which have been described at that stage, in the article to which I have referred. There were rather widespread changes of edema, early degeneration, lymphocytic infiltration and early phagocytic reaction of the involved nerves. The involvement included the spinal nerve roots, the peripheral nerves and the cranial nerves—a rather wide distribution.

---

* Haymaker, W., and Kernohan, J. W.: Landry-Guillain-Barré syndrome; clinicopathologic report of 50 fatal cases and critique of literature. Medicine 28:59-141, (Feb.) 1949.

The other changes in the disease are rather non-specific. A large percentage of the reported cases have died of bronchopneumonia. It is interesting that our case was of an extremely hemorrhagic type, and that no organisms which we should ordinarily consider significant in the etiology of pneumonia could be cultured from the pulmonary material. I think that no virus studies were done on this case, but the type of reaction is rather suggestive of a virus type of pneumonia. This has been the finding in some of the other reported cases, although virus studies were negative in the series of which I have been speaking.

SUMMARY OF NECROPSY FINDINGS

The microscopic evidence of disease of the cranial and spinal nerve roots and peripheral nerves was compatible with the Landry-Guillain-Barré syndrome. Those findings consisted of edema, diffuse degenerative changes and minimal chronic inflammatory reaction in those nerves. The brain

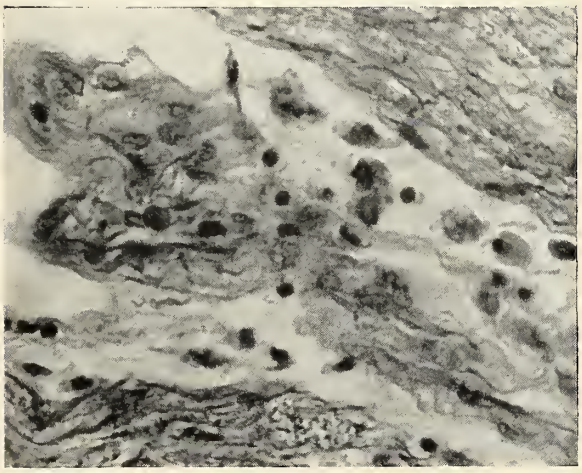


Figure 1. Spinal nerve root showing edema and degeneration, with infiltration by lymphocytes and macrophages.

and spinal cord were congested and edematous, but showed no specific changes. There was generalized visceral congestion and lymphoid hyperplasia, with mild adrenocortical atrophy.

Bilateral lobular pneumonia was the immediate cause of death.

NECROPSY DIAGNOSES

Landry-Guillain-Barré syndrome
Lobular pneumonia, extensive, bilateral
Tracheotomy, recent
Hyperplasia of lymph nodes, generalized
Adrenocortical atrophy, mild
Visceral congestion, generalized

Dr. Sahs: Though this disorder has been designated variously, the names of Guillain and Barré are most frequently given to it. Guillain, Barré and Strohl encountered several instances of this condition, recognized it as an entity and discovered that its most prominent characteristic was an elevation of the spinal fluid protein, without pleocytosis. Actually, the condition had been described by Sir William Osler at the turn of the century. It is also described as neuronitis, as polyneuritis with facial diplegia and as any of a host of other things.

The spinal fluid protein is elevated because it is beginning to take up the products of disintegration caused by involvement of the roots where they go through the spinal canal and are in fairly intimate association with the cerebrospinal fluid. Certainly the usual types of polyneuritis—i.e., the alcoholic, arsenical and others—are not characterized by an increase in the spinal fluid protein. Conversely, not all albumino-cytologic dissociation is due to the Guillain-Barré syndrome. Certainly one can have an increased protein without cells in an instance of spinal fluid block produced by a spinal cord tumor, for example. Certain features are seen more or less typically in this disorder. In about 50 per cent, there is some type of antecedent infection. The individual has had an upper-respiratory infection or an attack of gastroenteritis. Then there is a latent period of a week or ten days and, finally, the symptoms of polyneuritis.

Severe pain is not a characteristic feature, although the patient may have some pain and tenderness in the involved muscles. There is a tendency for the condition to be symmetrical, and very often the proximal groups of muscles are more severely affected than the distal ones. Of course there are changes in the reflexes, as you saw in this situation. Sensory changes are often more severe for proprioceptive than for superficial or cutaneous types of sensitivity.

Many attempts have been made to identify the cause of the disorder. A picture similar to this can be produced by diphtheria, but in that disease there is usually an involvement of the pharyngeal musculature early in the illness, and, of course, paralysis of accommodation will also give one a clue.

The condition is also seen in infectious mononucleosis, and in the literature one will find more and more references to Guillain-Barré difficulty following mononucleosis. Unfortunately, we did not test for mononucleosis in this particular instance. I think the outlook is often directly proportionate to the rapidity with which the condition develops. Anyone who has to have a respirator within a week after the onset is certainly in a most precarious condition. Those people in whom polyneuritis develops rather slowly over a period of several weeks seem to have a much better outlook. Age has something to do with outlook, of course. The disorder is tolerated less well by older people. The overall mortality rate is between 20 and 30 per cent.

The disorder must be distinguished from poliomyelitis. The latter usually is characterized by

headache and fever. And the muscle weakness is usually spotty, affecting, for example, the triceps group on one side and the perineal group on the other. This lack of symmetry is usually quite typical of poliomyelitis. Further, the presence of cells in the spinal fluid would assist one in identifying poliomyelitis. It isn't often that poliomyelitis is associated with any changes in sensation. Sometimes meningeal carcinomatosis will cause difficulty in the differential diagnosis. In a few instances patients have a diffuse spread of carcinomatous lesion to the spinal roots. In addition, one is constantly reminded of the possibility of a spinal cord compressing lesion acting as an ascending paralysis and producing an increasing spinal fluid protein. But usually those situations can be resolved by careful and repeated examinations.

If the individual survives the acute period of infectious polyneuritis—and by that I mean this very critical period when respiration may fail—then his general outlook is good. Recovery takes place slowly, but it is eventually complete, at least in the majority of instances. There are a few cases in the literature in which complete recovery did not take place, but that situation is the exception rather than the rule.

In the light of our present knowledge, therapy can be no more than supportive. It entails the use of the respirator, tracheotomy, adequate fluids, care of the bladder, and, as soon as the patient begins to show improvement, the use of physical therapy.

Dr. Henry E. Hamilton, Medicine: Was there any evidence of trouble within the muscle, with round cell infiltration or anything like that?

Dr. Stamler: No cardiac lesions were found in this case, nor were there any demonstrable lesions of the skeletal muscle. Myocarditis has been reported in a rather small percentage of cases, and of course in the most advanced cases there is a widespread degeneration of skeletal muscle. But the cardiac changes seem to be very inconstant.

Student: What kind of muscular recovery can one expect in a patient who survives?

Dr. Sahs: Usually complete recovery. I mean complete restoration of function of all types, rather slowly over a period of three, four or six months. Our concern is to carry the patient over the acute period.

Dr. Robert A. Utterback, Neurology: It is reasonably certain that the elevation in pulse rate, blood pressure and respiratory rate was due to respiratory embarrassment. In a condition like this, a real emergency exists when a patient enters the hospital with a rising pulse rate, rising blood pressure, and a faster and faster respiratory rate. It is just the same as if a bulbar poliomyelitis case came in with a partially paralyzed diaphragm, for in all probability the central nervous system hypoxia, secondary to the poor vital capacity, will aggravate the illness. Unless the patient can be put into a respirator and adequate respiratory intake can be facilitated, his course is certain to go rapidly downhill. I do not know whether it was quite clear in the protocol, but this rapid rise in blood pressure was the principal reason, I believe, for putting the patient into the respirator. We felt that respiratory embarrassment was the reason for it.

I want to make one other little comment here, before I forget it. As you have noticed, we have been talking about what are frequently considered two diseases. Landry's ascending paralysis used to be described as a distinct syndrome. But the term is seldom used any more, for many of us now feel that it and the Guillain-Barré syndrome are two aspects of the same disease process. The distinction was an arbitrary one in the first place, since it was based principally on the belief, held by Guillain and Barré, that the latter was a self-limiting process. Thus, by definition it was a benign illness. However, there had to be a marked albumino-cytologic dissociation. I believe Guillain even set a specific level of over 250 or 300 mg. per cent protein. On the other hand, Landry's ascending paralysis was arbitrarily defined as a disease in which the mortality rate was 20 to 40 per cent. Actually, as a number of cases are seen, they seem to fit along a continuum, and in consequence, it is very difficult to distinguish Landry's ascending paralysis from the Guillain-Barré syndrome. Many cases combine features of both, particularly in the matter of the spinal fluid protein. Landry's paralysis did not call for highly elevated protein, probably because in some of Landry's cases the patients soon died and just didn't have time to develop high spinal fluid protein. There are other names for this condition, one of which reflects what Dr. Sahs mentioned a moment ago: that a previous infection may have something to do with it, perhaps producing some sort of toxic reaction. Thus it is also known as "toxic-infectious neuronitis." Another name is "encephalomyelo-radiculo-neuritis," which indicates the various sites that may be involved. The "encephalo" refers to a mild encephalitis which may sometimes be noted in these patients. They may be lethargic, or they may be hyper-irritable.

Now let me say a word about the use of cortisone. About a year ago, or perhaps a little more, there was a report in the literature that dramatic recovery had followed its use in a few cases. Shortly afterwards, a rather fulminating case entered the Veterans Hospital, and Dr. VanAllen began cortisone therapy. Sure enough, about 24 or 36 hours later there was a rapid improvement. So we began to feel that it was very worthwhile. But it was not long afterward, as I recall, that the subject of our conference came to us, and another patient with the same disease came to the Veterans Hospital. Both of them were given cortisone, and both of them died. In consequence, we lost our enthusiasm for cortisone. Since then,

there have been reports in the literature both ways—as being beneficial and as being no help at all. The truth of the matter must be that since we don't have any way of predicting the course of the illness, it is very difficult for us to say whether cortisone helps in any particular instance.

To me, it seems very unlikely that the nasal oxygen which the patient received was of any value. I find it difficult to understand how nasal oxygen can help anyone who has a markedly diminished vital capacity. It's hard to see how the oxygen can get into the lungs. You will notice that when the patient was admitted to the hospital, he had difficulty swallowing and had a huskiness in his voice, along with some elevation in blood pressure. It seems likely to me that he was in a precarious situation right at that time. There is a question in my mind as to whether there might have been a different course of events if a tracheotomy had been performed immediately and the patient placed in the respirator. It is very hard to make such a decision when you don't really know what course to expect.

One other little thing that I want to point out, since it is very helpful in the differential diagnosis, is the marked weakness of the trunk musculature in this syndrome.

Incidentally, some of you may have been interested, as I was, in reading a column in one of the recent journals by a doctor who had survived a period in a respirator.* His comments were to the effect that if he had it to do over again, he would never allow himself to be placed in a respirator because life there is many times worse than death. This may be true for poliomyelitis—and that is what he was referring to—but I think it is certainly not true for this Landry-Guillain-Barré syndrome, in which there may well be complete recovery. It is surprising how much recovery these patients may achieve, starting from a complete quadriplegia with facial diplegia and inability to use either diaphragm or thoracic musculature, and within a matter of weeks recovering all those functions without recognizable neurologic deficit.

Dr. Davies: I should like to ask Dr. Utterback when a tracheotomy should be performed, and whether a sick patient should ever be put into a respirator without having had a tracheotomy.

Dr. Utterback: Those are tough questions, for there are "eminent authorities" with exactly opposite opinions. Personally, I don't feel that a patient with bulbar polio, or a person with a rapidly developing Landry-Guillain-Barré syndrome should be placed in a respirator without having had a tracheotomy. There is a school of thought which says that if there is no apparent involvement of the vagus—i.e., if the patient can swallow and bring up his tracheo-bronchial secretions—there is justification for taking this chance. It depends a little on how good an otolaryngology service is available to do the tracheotomy, for once the patient is in the respirator, it is quite a trick to perform that operation.

Dr. Sahs: We have at the moment in University Hospitals a woman who is almost as severely affected. She has survived to date. We are not making any exorbitant claims, but we have been able to maintain her without putting her into a conventional iron lung. Dr. W. K. Hamilton, would you care to discuss the "gadget" by which we have been able to do that?

Dr. William K. Hamilton, Anesthesiology: We too are concerned about preventing the deaths of patients whom we put into the respirator. Whether they die of a myocarditis or something like that, I don't know, but the death rate is certainly high. I think that there are two main problems: one is the big difficulty of nursing respirator patients, and the other is the hemodynamic effect of the changes that occur in pressure gradient between the chest and the peripheral veins. I shan't go into that latter problem at length, but I should like to say that if we can develop a practical respirator in which the entire body is subjected to no other than ambient pressure and in which we can make the mean airway pressure approximate the normal, we won't be likely to produce a harmful change in the circulatory dynamics. It can be demonstrated time and time again that one can increase and decrease cardiac output and increase and decrease peripheral blood pressure by manipulating this positive pressure on the airway.

Our attempt, therefore, has been to develop a respirator which does not prevent adequate nursing care, but which will allow us to apply controllable degrees of positive *and negative* airway pressure. We have used a windshield-wiper mechanism to supply power and have attached the "wiper arm" to operate a bellows that applies positive and/or negative pressure to the airway. The model that we have is quite small and will fit on top of a standard hospital bedside stand. It is equipped with valves which allow us to alter inspiratory and expiratory pressures as we see fit, and also to vary the rate and the tidal volume. We have used it on several patients and feel encouraged about it, but it still requires considerable work before we can determine what its ultimate place will be.

I should like to make one correction, if I may, in Dr. Utterback's statement that hypoxia causes this hypertension. I believe that it is asphyxia, rather than hypoxia, and I think the connotations are real. It is something that one cannot correct with oxygen therapy.

Dr. Utterback: Do you mean to imply that once

(Continued on page 208)

* Baer, L. S.: Iron lung?—Not for me. J. IOWA M. SOC., 45:46, (Jan.) 1955 (reprinted from CALIF. MED., Dec., 1954, pp. 420-421).

Editorials

UNIVERSITY ISSUE

The JOURNAL is happy to continue the custom of devoting the scientific section of its April issue to articles contributed by faculty members of the College of Medicine at the State University of Iowa. This year's University Issue is dedicated to Dr. H. Dabney Kerr, who has given outstanding leadership in the solution of problems in the field of roentgenography.

The papers again are varied, both as regards subject matter and method of presentation—a fact that emphasizes the diversity and the individuality of research and teaching at Iowa City.

Congratulations are due to Dr. E. W. Scheldrup and his committee for their efforts in planning and assembling these materials.

APRIL IS CANCER MONTH

A change in the age composition of the country's population has necessitated an alteration in the American Cancer Society's slogan: "Cancer strikes one in five. Strike back!" Overall death rates in most age groups are lower than they were, but because the reported rates for the development of cancer are increasing and because each individual American, with his lengthened life-expectancy, has more years in which to be struck, the battle cry must be reworded: "CANCER STRIKES ONE IN *FOUR*. STRIKE BACK!"

The striking power that the Iowa Division of the American Cancer Society is asking citizens to provide this month is $650,000. If one assumes that the uses to which this year's contributions are put will correspond pretty well with the uses made of last year's, he can expect that 34.3 cents out of every dollar will go to finance research—25 cents through the Society's national office, and 9.3 cents directly to Iowa research programs through the office in Mason City. In addition, the Iowa Division has budgeted an additional 2.3 cents for local research projects for the coming year. In 1954, the subsidies went to investigations being carried on at Ames, Iowa City and Council Bluffs.

Nineteen cents from each dollar financed lay education programs, including the publication of CANCER NEWS and NEW HORIZONS, and 6.3 cents was spent in co-sponsorship, with the Iowa State Department of Health and the Iowa State Medical Society, of refresher courses for physicians, dentists and nurses, in providing 50 nurses' scholarships, in distributing the bi-monthly magazine CA to all Iowa physicians, in providing special materials for nurses and pathologists, and in furnishing speakers, slides, films and exhibits for over 100 professional meetings. Three cents of each dollar was allocated to the national office for medical grants to institutions, fellowships and individuals.

Service to cancer patients, including part-time housekeeping and nursing care, surgical dressings, transportation to and from clinics and hospitals, loan closet service and information centers, cost 15.2 cents of every cancer dollar last year.

The Iowa Division's administrative and fund-raising costs totaled 7.9 cents per dollar in 1954, and if the 12-cent allocation to the national office is entirely, or even principally, for executive and clerical work, the share of the cancer dollar that is spent for purposes other than a direct fight against cancer is perhaps too large.

But however that may be, the need for the work that the American Cancer Society and its Iowa Division are doing is undeniably great. At the present rates, 40,000,000 Americans now living will sometime develop cancer, and unless new and more successful means of fighting it are developed, 24,000,000 of them will die from it.

ERYTHROBLASTOSIS FETALIS

Dr. A. S. Wiener has again emphasized the importance of following the anti-Rh titer during pregnancy in women who lack the Rh factor in their own erythrocytes.* With this information, the presence or absence of erythroblastosis fetalis can be predicted with reasonable accuracy. Even though there are as yet no completely satisfactory methods of preventing the disease or ameliorating its effects before birth, the physician can be prepared for the problems of the erythroblastotic newborn. Treatment can thus be instituted promptly, and many of the deaths and sequelae due to erythroblastosis can be prevented. Little can be done about the intra-uterine deaths as yet, but much can be done for the infant who is alive at birth and lives long enough to be treated.

The quantitative determination of anti-Rh antibodies in the mother's serum is a fairly delicate test. Proving the presence of the antibody is not especially difficult, but measuring the titer of antibody requires careful technic and expert skill. Accuracy is essential, for it is the rise in the titer that becomes important, and not the mere presence of the antibody during the course of a given pregnancy. There are several adequate methods for measuring this titer, but the results obtained by one method cannot be compared with those obtained when a different method is employed. If the figures obtained are to be relied upon when one

* Wiener, A. S.: Misinformation about Rh. J.A.M.A., 157:9, 749, (Feb. 26) 1955.

on all 4 count

AC





wide spectrum of effectiveness
rapid diffusion
prompt control of infection
minimum side effects

he decision often favors

ROMYCIN*

HYDROCHLORIDE
TETRACYCLINE HCl *LEDERLE*

Compared with certain other antibiotics, ACHROMYCIN offers a broader spectrum of effectiveness, more rapid diffusion for quicker control of infection, and the distinct advantage of being well tolerated by the great majority of patients, young and old alike.

Within one year of the day it was offered to the medical profession, ACHROMYCIN had proved effective against a wide variety of infections caused by Gram-negative and Gram-positive bacteria, rickettsiae, and certain viruses and protozoa.

With each passing week, acceptance of ACHROMYCIN is still growing. ACHROMYCIN, in its many forms, has won recognition as a most effective therapeutic agent.

Lederle

LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U. S. PAT. OFF.

undertakes to predict the presence or absence of a rise in anti-Rh antibody titer during a given pregnancy, consideration must be given to the methods used and the skill of the person performing the titrations. For this reason, the same laboratory should be utilized for each examination if the data obtained are to be compared with data obtained at a prior or subsequent time during the course of the pregnancy. Even in expert hands, according to Wiener, the methods have an intrinsic error of at least 100 per cent.

Of course, the possibility of erythroblastosis is not likely to be considered unless the mother's Rh type is known. This procedure is relatively simple and relatively inexpensive in most laboratories. It can be done in any doctor's office, for that matter, and requires a minimum of equipment (glass slides, heated stage and typing serum). However, if errors are to be avoided, the manufacturer's directions which accompany each bottle of serum must be followed exactly.

The clinical management of erythroblastosis depends heavily upon laboratory methods and blood bank facilities. These are ordinarily available in any of the larger laboratories. Mail-in service should adequately handle the needs of the physician who is confronted with the management of an Rh-negative mother, but will hardly be adequate to provide the service needed when the erythroblastotic infant is the problem at hand.

TENTH NATIONAL CONFERENCE ON RURAL HEALTH

Over 500 persons participated in the Tenth National Conference on Rural Health held recently in Milwaukee. Among them were farm organization officials, agricultural extension workers, physicians, farmers and other interested persons.

The program was planned around four main topics: farm and home safety, family responsibility for health, using available health and medical care resources, and how the job is done. These topics were debated endlessly in the halls and over the tables, and one of the striking aspects of the meeting was the feeling that the talk didn't concern "goals" or "program"; rather, it concerned people, and particularly the rural people of our nation.

Physicians were in the minority and did not dominate the meeting in any sense of the word. Yet, they were there to offer suggestions and advice on particular problems as they appeared. The emphasis was on individual responsibility, and from there it progressed to family and community responsibility. In the accident phase of the program, it was pointed out that the individual must become safety conscious. Families need to employ a family physician, to become acquainted with him and to align themselves with him as patients before illness or accident strikes.

Reports of community activity along health lines were numerous, proving that "it can be done." Some very solid achievements have been accomplished in the ten-year period, providing outlines for other communities. Optimism and friendly cooperation predominated as the mood of the meeting, auguring well for the future.

GALLOPING SOCIALISM

The role of Cassandra, the mythological figure who was doomed by the gods to prophesy calamity but never to be believed, is an unattractive one. But as regards socialism, it seems that we physicians are stuck with it.

Despite the recommendation by its Medical Task Force, consisting of 14 physicians and a dentist, that non-service connected disabilities of veterans be treated in government hospitals and at government expense no longer than three years after the men's separation from the armed forces, a change in policy which, it is estimated, would have reduced the potential patients from 17,500,000 to approximately 3,000,000, the Hoover Commission has taken a step in the opposite direction. Not only has it failed to advise the three-year cutoff on hospitalized care for non-service connected cases, but it has suggested the establishment of outpatient facilities for all of those men and women. Heretofore, only veterans who had contracted their ailments while in service have been eligible for outpatient attention.

As Dr. George F. Lull has observed, "To remove the three-year limit and, at the same time, furnish the non-service disabled veteran outpatient care in veterans' hospitals is certainly not in keeping with the commission's objective of trying to eliminate wasteful spending and the unnecessary intrusion of the federal government in private affairs."

In addition, socialism continues to threaten our country from without, and we have occasion to lament anew that Congress failed to pass the Bricker Amendment, a measure designed to prevent agreements among the members of international organizations to which the United States belongs from becoming, automatically, the law of our land.

In the February 19 newsletter of the World Medical Association, Dr. Louis H. Bauer calls attention to the machinations of the International Social Security Association. The term *social security,* he explains, means different things in Europe and the United States. In Europe, it includes compulsory medical and hospital insurance. Here is a sample that he gives of what that organization proposes to do: "The Committee of Experts, composed of representatives of 17 nations of Europe, Asia and America, recognizing the need for cooperation with the doctors for public health and

social progress, demanded of the medical profession that it accept the principles of social security in order to adapt its work to the needs of modern society. Collaboration is possible only if the medical profession *adopts as its own,* the principles on which social security is based. These general principles *which must* be accepted by doctors *must be laid down by legislation.*"

INFORMATION ABOUT THE NEW VETERANS MEMORIAL AUDITORIUM

Physicians attending the annual meeting of the Iowa State Medical Society on the 24th to the 27th of this month will find the new Veterans Memorial Auditorium an excellent meeting place, far superior to any that we have had in many years. But because it is new and unfamiliar, we think we should tell readers of the JOURNAL how to reach it from downtown hotels and what they will find in it after they arrive.

The Auditorium is located between Third and Fifth Avenues (east and west of the building) and Crocker and Center Streets (north and south of the building). It is approximately four blocks north of Grand Avenue, and thus is not too long a walk from the Savery, Kirkwood or Brown Hotels, although it is uphill. If several physicians join to take a taxi, the fare should be very little from those or any of the other hotels.

Because Fifth Avenue is a one-way street, southbound, physicians driving from the loop should plan to drive north on Sixth Avenue (a northbound street) to Crocker, then turn east to Fifth, and go south to the parking entrance. Or, if they prefer, they can drive north on Fourth to Center, then right to Third, and left to the parking area entrance.

The parking area now in use is at the north side of the Auditorium, but the south area may be ready by the end of April.

Entrance to the building will be at the west (Fifth Avenue) side, where the doors open on the arena floor (second floor of the building). The registration desk, technical and scientific exhibits and luncheon area will be on that floor.

Ramps and stairs lead to the third floor, where most of the meeting rooms are situated. The main meeting room is over the entrance at the west. It is in reality two rooms divided by a soundproof partition that can be opened or closed. The general sessions and the medical section will be held in the larger, or south, one of those rooms. The House of Delegates and the surgical section will occupy the smaller, or north, one.

Because the building is still in the process of construction, and because some changes have been made in the original plans, some of the announcements in the program as printed in the March JOURNAL as regards the rooms in which some of the smaller meetings are to be held now appear to have been in error. It is possible, indeed, that accurate scheduling cannot be done until just before the annual meeting begins, but there will be signs to direct members and guests.

In general, the following seems definite. Along the north of the building there are a number of rooms, reached by a hall running from the west ramps to the east end of the building. On the right-hand side of this hall, under the permanent seats of the arena, are many small rooms that will be suitable for small committee meetings. On the left-hand side of this hall are a "Band Room" that will be used for at least one meeting, "Committee Room B" that will house the eye, ear, nose and throat section, and "Committee Room C" that will, at different times, accommodate the pediatric and obstetric sections.

Along the south wall, a similar arrangement prevails. There is a check room along that hall that will make a very good meeting room, and a good press room.

On the arena floor, there are several rooms that will make good meeting rooms. We shall use the ones that are finished at the time of our meeting, and label them clearly so that they can be found easily. Scientific movies will be shown in the dressing room at the far northeast corner of the building, adjacent to the scientific exhibit section. The arena floor is adequate for the technical and scientific exhibits and for the luncheon area besides.

We welcome all members to the annual meeting, and assure them that they will enjoy the facilities afforded by the new Auditorium.

GOLF TOURNAMENT

The annual golf tournament of the Iowa State Medical Society will be held on Sunday, April 24, 1955, at the Wakonda Club, in Des Moines. Contestants may tee off as early as they wish, and supper, as usual, will be served at the conclusion of play.

Additional information can be had from Dr. D. A. Glomset, 1102 Equitable Building, Des Moines 9, who has charge of arrangements.

Plan to visit the Blue Cross-Blue Shield Lounge during the Annual Meeting. It will be located in the center of the Exhibit Hall, on the main arena floor of the Veterans Memorial Auditorium.

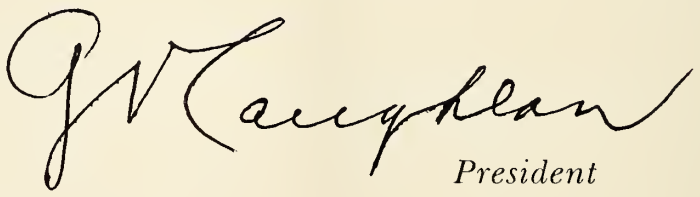
President's Page

This is the twelfth and final letter that I am writing for the President's page.

It has been a difficult year. Many problems have beset us, and none has been solved. Yet, I feel that there has been progress, for I am sure that we have a vital, alert membership and that every Iowa physician is aware of the dangers surrounding us and of the necessity for combined action to ward them off.

I would be remiss if, in this final word to the membership, I did not pay tribute to all of the unselfish efforts made for the good of Iowa medicine in this past year. The officers of the Society have been very active, the committees have been faithful and industrious, the Executive Council has been called upon several times to make important decisions, the House of Delegates was called into special session, and the headquarters employees have been most diligent and unselfish in their response to the demands made upon them.

Though my work has been difficult at times, there has been much pleasure for me in serving my colleagues in Iowa, and the honor of having been head of this great Society is one that I shall cherish as long as I live.



President

THE DOCTOR'S BUSINESS



Collect Your Accounts!

MILLARD K. MILLS

WATERLOO

One of the best ways to lose a patient is to let his account become delinquent. Thus, it is important not only to your finances but to your entire practice for you to make sure that your collections are good.

If yours is an established practice, here are two guides that you can use in determining whether or not you have a collection problem:

1. Your collections should consistently be 95 per cent or over. To determine your collection percentage, divide your year's cash receipts by your business done during the same period.

2. On the average, you should have no more than four months' business done on your books, including everything right up to the date of your survey. (If your average business done is $3,000 per month, your accounts receivable should not be appreciably greater than $12,000.)

FOUR RULES

If you maintain the following rules religiously, you will have a minimum number of delinquent accounts:

1. Inform the patient of every charge.
2. Send monthly statements to all accounts.
3. Have an understanding about payment with each patient who does not have an "A" credit rating.
4. Follow up each account to see that patients carry out their arrangements to pay.

On minor charges, the patient can be informed by means of the charge slip. A recent survey proved that doctors who used charge slips averaged 5 per cent higher collections than did other physicians.

When a major fee is to be incurred, it's up to you to explain it to the patient. Conclude your explanation by saying, "Any financial arrangements that you make with my secretary will be all right with me." Then don't discuss those arrangements yourself! They are your secretary's job, and there is no way in which you can embarrass her more seriously or hinder her more greatly in making your collections than by enabling patients to tell her, "The doctor told me I could pay any time I was able." Though in particular instances you have said nothing of the sort, her knowledge that you sometimes do take those matters into your own hands will handicap her.

FOLLOW UP YOUR ACCOUNTS

When successive statements have been sent but an account has run for 90 days without service or payment, it's time for a letter. That letter can be short, but it should give the patient an opportunity to save face by suggesting that perhaps he has forgotten, that the bill failed to reach him, or that he may have another reason. During the next three or four months, other letters should follow, each one polite, but each a bit firmer than its predecessor. Your final letter will state that the account will have to be given to a collector unless payment is received within ten days.

Then, if payment is not made, *do* turn it over to your collection agency. If you don't, the patient will know that you don't mean what you say. He probably will also guess that you are reluctant to lose the agency's collection fee. Instead, your assistant will probably spend an equal amount in time, and will fail to collect a cent!

This same follow-up should be made in instances where promises have been made and not kept. And when a patient has made one small payment in response to your letter and then has stopped, essentially the same procedure must be followed. Thank him, but tell him that his installment payments must be regular.

As long as the patient realizes that a close watch is being kept on his account, he will be less inclined to avoid payment. Good collections are the result of consistent effort on your part. You must set the example. If you are faithful in your collection efforts, your patients will learn to be faithful in their payment habits.

BLUE CROSS



BLUE SHIELD

Why We Need Public Relations

The year 1955 is symbolic to the Blue Cross-Blue Shield movement in Iowa. Fifteen years ago, the two Blue Cross Plans began operations, and ten years ago, Blue Shield became a corporate entity.

The Plans have done much to assist people to budget for their health needs. In the beginning, doctors and hospital personnel were very close to the general public. They all worked constantly together to solve the economic problems facing them in the late '30's and early '40's, for the depression years were fresh in everyone's mind.

But as economic conditions improved, the Plans, the doctors, the hospitals and the public drifted apart, and in consequence there have been many misunderstandings.

Everyone has become so busy in his own field that such things as working together on a community basis have been forgotten. There is a great need to rehumanize ourselves and work toward a mutual understanding. As workers in the health field, all of us must become public-relations minded. We must broaden the base of medical understanding. The public must know the true meaning of such phrases as *free choice* of hospital and doctor.

It is the responsibility of us all to keep people informed of the advantages of our present system. We must be sensitive to the public's needs, and we must let the public dictate by slow evolution, or it will dictate by revolution.

Closed panel medicine, union sponsored health plans, cooperatives and increasing governmental aid in the establishment and maintenance of health facilities—all are threats to the individual practitioner of medicine. Thirty million people now are eligible for some form of government health care, according to a recent report of the Hoover Commission.

Much needs to be done in the field of public relations by all persons in the voluntary health field to help the public understand the basic issues. Otherwise, people may be inclined to give up a disproportionate amount of their freedom for a relatively small amount of security.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

TEXTBOOK OF PHYSIOLOGY, by *John F. Fulton,* M.D. (Philadelphia, W. B. Saunders Company, 1955. $13.50).

CHRISTOPHER'S MINOR SURGERY, Seventh Edition, ed. by *Alton Ochsner,* M.D., and *Michael E. DeBakey,* M.D. (Philadelphia, W. B. Saunders Company, 1955. $9.00).

CURRENT THERAPY, 1955, ed. by *Howard F. Conn,* M.D. (Philadelphia, W. B. Saunders Company, 1955. $11.00).

OUTLINE OF THE TREATMENT OF FRACTURES, Fifth Edition, by the Committee on Trauma (Chicago, American College of Surgeons, 1954. $1.00).

EARLY CARE OF ACUTE SOFT TISSUE INJURIES, First Edition, by the Committee on Trauma (Chicago, American College of Surgeons, 1954. $1.00).

CLINICAL ELECTROMYOGRAPHY, by *Alberto A. Marinacci,* M.D. (Los Angeles, The San Lucas Press, 1955. $6.00).

THE HUMAN MACHINE, BIOLOGICAL SCIENCE FOR THE ARMED SERVICES, by Capt. C. *W. Shilling,* U.S.N. (Annapolis, The United States Naval Institute, 1955).

BOOK REVIEWS

THE KIDNEY (A Ciba Foundation Symposium, arranged jointly with the Renal Association), ed. by *A. A. G. Lewis,* M.D., and *G. E. W. Wolstenholme,* M.B., with the assistance of Joan Etherington. (Boston, Little, Brown and Company, 1954. $6.75).

This book represents an account of the proceedings of the international symposium on the kidney arranged jointly by the Ciba Foundation and the Renal Association and held in London on July 7, 1953.

It is simply a collection of papers recorded verbatim, plus the discussions by numerous authorities on on the various physiological aspects of the kidney, both functional and structural.

It has slight interest, I would think, to the general practicing urologist, but would be of considerable value to the medical student, biochemist or physiologist and to those interested primarily in research on the kidney. It is an excellent reference book for that purpose and would make an excellent review for any young urologist in anticipation of board examinations for certification.—*C. W. Latchem,* M.D.

THE REPRODUCTIVE SYSTEM, by *Frank H. Netter,* M.D. (Volume II of the Ciba Collection of Medical Illustrations). (Summit, New Jersey, Ciba Pharmaceutical Products, Inc., 1954. $13.00).

This book probably represents the most complete atlas of gynecology and male urology of our day. It fills a big void in the literature dealing with those subjects, and it contains hundreds of beautifully drawn, medically accurate illustrations, done as only Dr. Netter can do them and representing clinical conditions, both physiologic and pathologic. The illustrations are accompanied by detailed, interesting and informative discussions written by well qualified gynecologists, urologists and pathologists.

Dr. Netter has included all of the modern concepts of our specialty, gynecology. For the first time in this book, one finds the very necessarily related male genitourinary system. The gynecologic system is covered in all details of physiology and pathology, and endocrinology and the diseases related to pregnancy are delved into. Anatomy, histology and embryology are all interestingly presented.

The book is arranged for quick reference and easy and interesting reading. It should be a "must" for all medical libraries, and should be included on all reading lists for medical students and for those of us who wish an accurate and interesting review. Dr. Netter and Ciba should be congratulated on the completion of such a timely and well done work. We shall all benefit from their efforts.—*Milton S. Mark,* M.D.

CONTRIBUTIONS TO THE STUDY OF CEREBRAL ANOXIA, by *Cyril B. Courville,* M.D. (Los Angeles, San Lucas Press, 1953. $6.50).

Dr. Courville's preface states that "about twenty years ago . . . [he] was introduced to the problem of cerebral anoxia when he was asked to see a patient who had failed to recover from an episode of cardiorespiratory failure under nitrous oxide anesthesia." His study of that and similar cases formed the basis for his monograph on the subject of asphyxia in nitrous oxide anesthesia published in 1936. He was later encouraged to study the effects of cerebral anoxia in relation to certain so-called degenerative diseases of the nervous system, including conditions where mental deficiency, epilepsy and spasticity are outstanding features of the clinical syndromes.

The chapters include (I) a brief introduction; (II) a delightful history of asphyxia in legend, folk-lore and history; (III) case studies in cerebral anoxia, including autopsy findings in deaths from anesthetic agents, carbon monoxide poisoning, mechanical asphyxiation, circulatory failure and cyanide poisoning; (IV) a discussion of the mechanism and nature of consequent structural alterations, wherein the physical effects of anoxia are grouped as (1) necrosis of globus pallidus, which is designated as the key lesion of cerebral anoxia, (2) cortical effects, which are noted as progressive but slow deterioration of cortical nerve cells, (3) central myelinopathy, and (4) secondary vascular effects; (V) a consideration of anoxia and the cerebral circulation, in which it is demonstrated that ischemia is the treacherous offspring of anoxemia; (VI) the relationship between paranatal asphyxia and certain degenerative diseases of the brain in infancy and childhood; and (VII) a recapitulation of the problem and some provocative questions regarding unsolved problems. A bibliography and an index are provided.

The problem of cerebral anoxia is even more pertinent today than it was in the time of Aristotle, who is reported to have observed, during the fourth century before Christ, that breathing on Mt. Olympus was difficult because of the thinness of the air. Today, we encounter the problems of high altitude not only in mountain climbing, but in flight, in the choice of a safe analgesic or anesthetic for mother and fetus in obstetrics, in the catastrophe of cardiac arrest in an-

esthetized patients (a situation which appears to be increasing in frequency), in chest injuries consequent to war and to automobile accidents, and in the newly devised technics of surgery of the heart, great blood vessels and lungs.

Dr. Courville's book, written in an engaging style by an original and well recognized authority on such matters, is handsomely printed and illustrated. The author concludes with the hope that his presentation will be ". . . the source of some instruction, of considerable interest, and of definite stimulation to the reader." That expectation is more than fulfilled, and I heartily recommend the volume to doctors in general, but in particular to anesthetists, obstetricians, pediatricians, surgeons, pathologists and neurologists. —*John T. Bakody,* M.D.

NERVOUSNESS, INDIGESTION AND PAIN, by *Walter C. Alvarez,* M.D., Popular Edition. (New York, Harper & Bros., 1954. $3.50).

In 1930, Dr. Alvarez wrote a book on "Nervous Indigestion" that has become a classic. In 1943, he enlarged the scope of the work and called it "Nervousness, Indigestion and Pain." It, in turn, was a great success. Now he has revised the volume to enable laymen to read it, and has issued this "Popular Edition."

In its newest form, the book (of 227 pages) is intended to supply information that the busy doctor lacks time to give his patients orally. In this day and age, patients seek information about their illnesses. Public health propaganda has taught them to do so. If the doctor doesn't take time to explain the basis for their symptoms, they may make inquiries on their own and reach erroneous conclusions. But if their difficulties are within the scope of Dr. Alvarez's book, they not only can find in it an explanation of their difficulties, but can get from it an appreciation of the problem that the doctor faces in dealing with such diseases.

In chapters dealing with "Handling the Nervous Patient," "Telling the Truth to Patients," "The Nervous Breakdown and Its Causes," "The Stormy Menopause" and others, the author depicts, in his well known smooth style, the background of many types of individuals with functional abdominal complaints. Doctors would do well to peruse the volume as they would a novel, and then place it in their reception rooms where their patients can read it as they wait. —*D. A. Glomset,* M.D.

SPORTS INJURIES (PREVENTION AND ACTIVE TREATMENT), by *Christopher Woodward* (London, Max Parrish and Company, Ltd., 1954. $3.00).

This volume has been prepared by a man who has been the honorary medical advisor to British Olympic teams on two occasions. He, himself, represented Cambridge in the half-mile, and has specialized in soft-tissue injuries in athletes.

Many of his ideas are at variance with methods of treatment accepted in the United States. In fact, he labels "fantastic" the idea of strapping joints for support. Many of his methods of treatment, however, are sound. The book is replete with illustrations.

Any physician who deals extensively with sports injuries would find it stimulating and helpful.—*Everett M. George,* M.D.

State University of Iowa College of Medicine Clinical Pathologic Conference

(Continued from page 198)

the blood pressure goes up like that, one can do nothing about it?

Dr. W. K. Hamilton: No, but this can happen with normal or above normal oxygen tensions. Carbon dioxide is also involved.

Dr. Sahs: Please forgive me for calling your device a gadget. It is a very ingenious instrument. The anesthesiologists deserve a great deal of credit for devising something that makes it possible for one to move the patient and to turn him regularly, so that he does not have to be pinioned in a massive iron lung.

Dr. Paul M. Seebohm, Medicine: What runs the windshield wiper?

Dr. W. K. Hamilton: The apparatus has the further advantage that it requires no electric power. It is powered by compressed air, compressed oxygen, or whatever one happens to have, requiring something in the neighborhood of two or three liters per minute. One can take oxygen that has been used to drive the windshield wiper, return it to the reservoir of a respirator and let a patient breathe it.

Dr. Seebohm: I have another question. About 20 years ago, it was considered rather bad to use a Pulmotor because occasionally it produced pulmonary hemorrhage? How is your machine different, or how do you avoid the pulmonary hemorrhage?

Dr. W. K. Hamilton: I think that the danger of pulmonary hemorrhage, either from the negative pressure in this type of respirator or from the positive pressure in a tank respirator, is much less than it used to be. Our device gets back very close to the Pulmotor, except that I believe it has a little wider range.

SERIOUS PROBLEM

Dr. Paul Kersten, Fort Dodge psychiatrist, in addressing a service club there six weeks ago, quoted figures to support his statement that mental illness is the most pressing of health problems. He said that half of the 28,000 suicides in the nation each year are due to mental depression, that most of the 250,000 children who are brought into juvenile court are emotionally disturbed, that the current ratio of divorces to marriages is one to four or five, that there are 750,000 alcoholics and that there are 100,000 dope addicts. He called attention to the fact that though half of the nation's hospital beds are occupied by mental patients, only five per cent of practicing physicians are psychiatrists.

Iowa Academy of General Practice

ACADEMY MEMBERSHIP

In 1946, a group of doctors met in San Francisco with the idea that those in the general practice of medicine, the family doctors, should be banded together in order not only to protect their interests but to raise the standards of medical care. It was through this interest and the work of those farsighted men that the American Academy of General Practice was founded. The membership in the organization has steadily increased, until at the end of 1954 there were more than 18,000 members pledged to the purpose of better medical care for the people and the requirement of postgraduate education for continued membership in the organization. More than 1,500 doctors joined the Academy in 1954. The Iowa Chapter increased its membership from 353 to 408 during 1954. Not only is it necessary for the physician to meet certain standards to retain membership, but each applicant is thoroughly investigated so that the members may be sure that he meets the prerequisites for admission.

Recently it has been found that the interest in qualified family doctors is nationwide and that the people are desirous of having the type of family care that such physicians can provide.

In the February issue of READER'S DIGEST, an article entitled "Family Doctor: Model 1955," by Paul de Kruif, appeared. The discussion includes a presentation of the activities and purposes of the American Academy of General Practice. The overwhelming amount of mail arriving at Academy headquarters is proof that people are looking for reliable family physicians. They are desirous of having someone they trust.

The following is a quotation from the HEADQUARTERS BULLETIN of the American Academy of General Practice, issued by the executive secretary, Mac F. Cahal:

"Inquiries have not been limited to hundreds of letters daily—long distance telephone calls from cities as far away as Ithaca, N. Y., are asking for the names of members of the Academy in those cities.

"The magnitude of the task of replying to all the requests is better appreciated if you consider that if only 1 per cent of READER'S DIGEST subscribers and buyers follow the article's suggestion by writing to me, we will get 175,000 letters. Besides the extra stenographic and clerical assistance needed, the postage, printing and paper for answering the requests will cost a lot of money. But I cannot conceive of an expenditure more worthwhile in advancing the Academy's overall program or in improving the status and prestige of Academy members.

"I am struck by three remarkable facts: Surprisingly few of the letters are from neurotics or crackpots. A very large proportion of the requests for a list of Academy members are from people who have just moved or are contemplating a move to a new community. A surprisingly small number of them are of the type one grows familiar with after a few years in medical organization work—the type which contain a long history and recital of symptoms mingled with criticisms of doctors generally and ending with 'I thought maybe you could tell me what my trouble was or why the doctor can't do anything for me.' The few of these we are receiving are answered with a form letter advising that only their family doctor can answer their questions."

FIRST T-V SYMPOSIUM

Those who attended the International Telecast on February 24, a symposium on streptococcal infection, felt that the evening was extremely valuable. The initiation of a means of education whereby thousands of physicians throughout two nations can learn what great teachers are thinking by watching and listening, rather than by reading, undoubtedly is one of the greatest advances in modern medical education. The program was very interesting and was presented in a very pleasing manner. We are proud to belong to the American Academy of General Practice, an organization which has the foresight to pioneer such an undertaking. We also wish to extend to the Wyeth Laboratories our sincere thanks and appreciation for their part in this extensive program.

In Des Moines, there were 51 who remained at the Hotel Kirkwood for a special dinner and lecture. Dr. Charles Read, assistant professor of pediatrics at the University of Iowa College of Medicine, discussed some phases of streptococcal infection not covered in the telecast and reviewed some of the results of his own work in therapy and prevention of complications. Dr. Read then conducted a profitable question-and-answer period for thirty minutes.

MENTAL ILLNESS

EPILEPSY

The term *epilepsy* implies the presence of convulsions. Many patients, however, may never have convulsions, though they have some impairment of consciousness for varied periods. Those changes, whether seen or merely complained of by the patient, are due to an abnormal neuronal discharge within the central nervous system. Therefore the term *cerebral seizures* would be more appropriate, for a cerebral seizure can be defined as a spontaneous paroxysmal discharge of a group of neurons. The terms *epilepsy, grand mal* and *petit mal* have little place in the understanding of such difficulties, and their use frequently discourages the search for the cause.

In epilepsy, the patient must be surveyed as a whole. Otherwise, much pathology will be overlooked. The family history, the patient's birth history and the history of generalized infections both in the patient and in the family must be thoroughly investigated. And importance should be attached to any period of infection in which confusion, or periodic or continuous loss of consciousness occurred. Cerebral anoxia will be suggested by periods of difficult respiration with prolonged or recurrent cyanosis. Icterus at birth, congenital abnormalities and possible brain injuries should be inquired about. The relationship of head injury to seizure is difficult to establish, since children normally incur many falls. Penetrating brain wounds, cranial fractures or subdural hematomas obviously can be precursors of focal seizures at any age. Seizures associated with lack of, or abstinence from, food are a basis for suspecting hypoglycemia. Examination of the fundi may suggest a vascular disease or an inflammatory disease such as toxoplasmosis. A port-wine nevus over the face may be associated with brain changes due to a similar vascular abnormality in the pia.

To remove the cause of the seizures wherever possible and to help the patient make an adequate adjustment to his disability, one should direct therapy toward the controlling of attacks. We are familiar with the use of drugs to elevate the convulsive threshold and thus prevent attacks and the obvious need for surgery if neoplasm is present, but no treatment program will be completely successful unless careful consideration is given to the emotional and physical rehabilitation as well. The emotional rehabilitation of the patient does not imply the necessity of intensive formal psychotherapy. Rather, it indicates that a practical, sympathetic approach should be made to the patient as a whole, in order that one may help him overcome the difficulties of social adjustment at home, and in school and at play, or at work. Thus, there is need for educating not only the patient, but his family and associates as well.

Advice should be given freely to the patient and his family with reference to a long term view of the problem. The situation should be approached much as for the diabetic. If there is no extensive organic brain damage and if the seizures are well controlled, the patient can be reassured that mental deterioration will not occur, and that he will not have an increasing addiction to drugs. Many patients suffer more from a fear of seizures than from the seizures themselves. They should be encouraged to look upon seizures as a temporarily disabling condition like migraine, and should be helped to overcome their feeling of inferiority and self-consciousness which is the result of their attacks.

As far as possible, they should be encouraged to lead normal lives, within reasonable restrictions. They should avoid excessive fatigue by having some regular time for eating and sleeping and by keeping all exercise moderate. In consequence, the patient should not participate in sports to the point of exhaustion. Swimming, boating and other dangerous sports can be permitted under proper safeguards, such as letting the patient participate in them only in the presence of other people. The risk involved in such activities is justified in most instances in order to prevent the development of chronic invalidism. But activities that endanger the lives of others, such as the driving of an automobile, should be forbidden. The patient's diet should be well balanced and simple. He should be warned to avoid alcohol, strictly. But social activities such as parties and dancing should be encouraged.

Relatives should be instructed on the care of the patient during a seizure. Education of the family members in regard to their attitude toward the patient's illness is very important. Excessive attentiveness and over-solicitousness are attitudes that they should avoid. Because of the danger of suffocation, patients who have nocturnal seizures should have small pillows. If at all possible, epileptic children should attend regular schools, and, if necessary, the physician should confer with the child's teacher to emphasize the importance of her providing him as normal a life as possible.

The question of special institutional care comes up only when the patient is violent in his behavior or exhibits psychotic manifestations. Then, as far as possible, he should be separated from other mental patients, and emphasis should be placed upon the medical control of his seizures and upon his rehabilitation.

Plan to attend the Iowa State Medical Society's Annual Meeting, April 24-27, 1955, in Des Moines.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

SALK VACCINE PROGRAM FOR 1955

Plans are progressing toward organization in each county so that, if the Salk poliomyelitis vaccine is approved and licensed, no time need be lost before vaccinations are started in Iowa.

At a joint meeting on February 10, the State Department of Health and the Poliomyelitis Committee of the Iowa State Medical Society approved the use of the vaccine in Iowa this year, provided that Dr. Thomas Francis, Jr., and his staff at the Polio Vaccine Evaluation Center in Michigan endorse it, and provided that the National Institutes of Health subsequently license it.

On February 15, a letter was sent to the secretary of each county medical society in the state

1. To inform him of the Committee's action of February 10.

2. To request that each county medical society consider approval of the program for its particular county at its next regular meeting, or at a meeting called for that purpose.

3. To urge, if the county medical society approves the program, that it be carried out as a mass school immunization. The Committee feels that any other type of program would be almost impossible to carry out, because of the difficulty of allocating vaccine on any basis other than that of school attendance. The State Department of Public Instruction's figures on school enrollment, on which allocations of vaccine must be made, are based entirely on the counties in which the children attend school. And eligibility for the vaccine through school enrollment and parents' signed requests would relieve the physician of all responsibility for establishing the children's eligibility.

4. To point out the necessity for a complete organization for administering the vaccine in each county so that injections can be started as soon as the vaccine is made available to the county. The Committee particularly stressed the necessity that representatives from the county medical society be active in the organizational work. Others who should be included are superintendents of schools, who must be asked to approve of the program and to assist in it, representatives of local nursing groups, and officers of PTA's and local chapters of the National Foundation for Infantile Paralysis.

5. To call attention to a letter from the National Foundation, dated January 10, 1955, of which the following is the gist:

a. That if and when licensed by the National Institutes of Health, the vaccine will be supplied by the National Foundation to state health officers in amounts sufficient for the vaccination of

(1) children who participated in the vaccine trials in 1954, *but did not receive the vaccine.*

(2) children in the first and second grades of all public, private and parochial schools in the continental U. S., in Alaska and in Hawaii in the spring term of 1955.

b. The plan of administration in any state will be the responsibility of the state health officer, who will work in cooperation with the state medical society and the state education officials.

c. After completion of this program, the National Foundation will not participate in the production, distribution or administration of vaccine.

d. First and second grade children were selected because the incidence of paralytic poliomyelitis is high among them, because they are readily accessible as organized units within the schools, and because the supply of Salk vaccine is limited.

e. It is expected that additional vaccine, in an amount equivalent to or greater than that contracted for by the National Foundation, will be obtainable through commercial channels for use by private physicians in immunizing their patients.

f. Vaccine for use in 1955 will be administered on the same dosage schedule as was followed in the 1954 field trial, i.e., 1 cc. of vaccine in each of three doses, given intramuscularly, the second inoculation one week after the first, and the third inoculation four weeks after the second.

g. Administrative procedures will not require extensive record-keeping. States may conduct follow-up studies for themselves, but there is to be no nationwide evaluation such as was done after the 1954 field trial.

h. Upon request from state health officers, the National Foundation will supply educational and other printed materials for use in the conduct of the vaccination program and will provide local cooperation and assistance through its chapters in all counties, as requested by local health authorities.

i. Those who attended the national meeting and participated in the decisions that have been sum-

marized included representatives of the AMA, the American Academy of Pediatrics, the Association of State and Territorial Health Officers, the American Public Health Association, the U. S. Department of Health, Education and Welfare and the National Foundation for Infantile Paralysis.

As of March 8, many of the county medical societies have reported approval of the program for their counties. In some, the county organization for the work has been set up. Much of the literature is on hand and is being sent to the counties. Plans for allocating the vaccine are also under way. It must be remembered that the vaccine will be allocated to a county only on the basis of the number of children there who are attending the first and second grades. In other words, allocation is *not* by county of residence, but by county of school attendance.

NEW HEALTH FACILITY AT COUNCIL BLUFFS

The Pottawattamie County Medical Society is one of several groups that have sponsored the establishment of a treatment center for handicapped children and adults at Council Bluffs. At the start, the project will provide only physical and speech therapy. Occupational therapy, special education and social and psychological services are to be added later. It is anticipated that the budget for the first year will be $12,500, none of which will be spent for housing, for the expectation is that suitable space will be provided virtually free of charge.

MORBIDITY REPORT

Disease	*Feb. 1955*	*Jan. 1955*	*Feb. 1954*	*Most cases reported from these counties:*
Diphtheria	1	3	1	Washington
Scarlet Fever	86	70	243	Black Hawk, Des Moines, Lee, Polk
Typhoid Fever	2	0	0	Floyd and Woodbury 1 each
Smallpox	0	0	0	
Measles	1116	723	665	Allamakee, Des Moines, Linn, Polk, Scott
Whooping Cough	119	102	28	Dubuque, Polk, Scott
Brucellosis	10	8	18	Scott 2, others scattered 1 to a county
Chickenpox	695	509	1003	Linn, Polk, Pottawattamie, Scott
Meningococcus Meningitis	4	2	5	Black Hawk, Guthrie, Pottawattamie, Wapello
Mumps	983	638	513	Black Hawk, Dubuque, Polk, Pottawattamie
Poliomyelitis	5	9	9	Black Hawk, Franklin, O'Brien, Polk, Scott
Infectious Hepatitis	193	170	445	Black Hawk, Dubuque, Linn
Rabies in Animals	15	24	25	Muscatine 2, Woodbury 2, others scattered 1 to a county
Tuberculosis	48	53	55	For the state
Syphillis	85	133	112	For the state
Gonorrhea	36	76	59	For the state
Psittacosis	1	—	—	Clinton
Trichinosis	6	—	—	Tama 6

TOBACCO-CANCER RESEARCH IS WELL FINANCED

The Tobacco Industry Research Committee has increased to $1,000,000 its fund for independent scientific research into tobacco use and health. "This million dollars is not a ceiling," T. V. Hartnett, the chairman, explains. "Rather, it is the minimum support that medical and scientific research can expect from the tobacco industry. . . . Our earlier pledge of providing continuing support still stands."

Parts of that million dollars are being allocated, by a scientific advisory board of which Dr. Clarence C. Little, of the Jackson Memorial Laboratory, Bar Harbor, Maine, is chairman, to institutions that have mapped out investigative projects which meet with that board's approval. Semi-annual progress reports are required of the grantees. Initial presentations of findings are to be made only in scientific journals or before scientific societies, but the Tobacco Industry Research Committee has promised to make no objection to the further publicizing of results, whatever they may be.

The members of Dr. Little's committee are Dr. McKeen Cattell, of Cornell University, Dr. J. H. Comroe, Jr., of the University of Pennsylvania, Dr. L. O. Jacobson, of the University of Chicago, Dr. Paul Kotin, of the University of Southern California, Dr. K. M. Lynch, of the Medical College of South Carolina, Dr. S. P. Reimann, of the Lankenau Hospital Research Institute, Philadelphia, Dr. W. R. Rienhoff, Jr., of Johns Hopkins, and Dr. E. B. Wilson, of Harvard.

POSTGRADUATE COURSES AT MINNEAPOLIS

Iowa physicians are invited to the following meetings, which will be held at the University of Minnesota's Center for Continuation Study, in Minneapolis.

April 11-13 Radiology for General Physicians. Registrants will spend most of their time in the University Hospital Department of Radiology reading films and carrying out procedures in association with members of the faculty of that Department. A minimum of didactic material will be presented.

April 14-16 Gynecology for General Practitioners. The course will deal with the general problem of vaginal bleeding.

April 18-20 Allergy and Chest Diseases for General Physicians. Special emphasis will be placed on the management of commonly-met problems in these fields. Skin-testing methods will be demonstrated.

May 9-14 Introduction to Electrocardiography. This year's course is intended primarily for physicians with little or no previous experience in electrocardiographic interpretation. Registrants will have an opportunity to interpret more than 200 electrocardiograms under the supervision of qualified instructors.

WOMAN'S AUXILIARY

to the

IOWA STATE MEDICAL SOCIETY

1955 Annual Meeting, Des Moines

PROGRAM

MRS. L. R. HEGG, *President*, presiding

Sunday, April 24

4:00 Pre-convention Board Meeting, East Room, Hotel Savery

6:30 Dutch Treat Supper (for board members and their husbands), Des Moines Golf & Country Club

Monday, April 25

8:00-4:00 Registration, Mezzanine, Hotel Savery—All physicians' wives welcome

10:00 Brunch, Terrace Room, Hotel Savery, honoring district councilors and county presidents

Invocation—Rev. Alfred J. Beil, D.D.

Address of Welcome—D. C. Wirtz, M.D., president of the Polk County Medical Society

Greetings—Mrs. H. C. Merillat, president of the Woman's Auxiliary to the Polk County Medical Society

Auxiliary Pledge of Loyalty—Mrs. E. S. Donohue, Leader, IV

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Response—Mrs. C. H. Flynn, president-elect, V

Introduction of Convention Chairman—Mrs. B. F. Kilgore, V

Adoption of Convention Rules

Presentation of Councilors and Introduction of County Presidents

Presentation of State Committee Chairmen

11:00 Presentation of Future Nurses Clubs—Mrs. E. A. Larsen, IX

Iowa Committee on Careers—Mrs. D. H. King, III

"Nursing in Other Lands"—Mrs. C. M. Hipwood, R.N.

12:00 Roll Call of Voting Delegates—Mrs. R. P. Mason, V

Minutes of the 25th Annual Meeting—Mrs. R. P. Mason

Treasurer's Report—Mrs. H. H. Smead, V

Finance Chairman's Report, and Acceptance of Budget—Mrs. W. B. Chase, Jr., V

Recommendations

Report of Nominating Committee (First Reading)—Mrs. L. A. Coffin, VIII

In Memoriam—Mrs. R. J. Selman, IX

12:40 Publications Panel—Mrs. J. F. Gerken, moderator, VI

"What is the BULLETIN?"—Mrs. F. B. Leffert, IX

"What is the HANDBOOK?"—Mrs. D. C. Sharpe, VII

"Selling Points of TODAY'S HEALTH"—Mrs. R. H. Moe, XI

"Your AUXILIARY NEWS"—Mrs. K. M. Chapler, V

Constitution and By-Laws Revisions (First Reading)—Mrs. W. A. Seidler, V

Awarding of Door Prizes—Mrs. D. F. Crowley, Jr., V

3:00-5:00 Tea—Iowa Society for Crippled Children and Adults Center—Mrs. H. C. Merillat, Chairman Handicapped Work, V

Busses will leave Hotel Savery and Hotel Fort Des Moines at 2:30 and 3:30 p.m.

Tuesday, April 26

8:00-12:00 Registration, Mezzanine, Hotel Savery—All physicians' wives welcome

9:00 Morning Session, Terrace Room, Hotel Savery

Roll Call of Voting Delegates—Mrs. R. P. Mason

Minutes of Previous Meeting—Mrs. R. P. Mason

President's Report—Mrs. L. R. Hegg, III

Constitution and By-Laws Revisions (Second Reading)—Mrs. W. A. Seidler

Report of Nominating Committee (Second Reading)—Mrs. L. A. Coffin

Election Instructions—Mrs. J. A. Downing, parlimentarian, V

Election of Officers

Election of Delegates to the National Auxiliary Convention

10:30 "Important Legislation"—F. C. Coleman, M.D., chairman of the Legislative Committee, Iowa State Medical Society

Introduction of New Officers

11:30 School of Instruction for all Councilors and County Officers, East Room, Hotel Savery—Mrs. D. H. King, III

12:15 President's Luncheon—Terrace Room, Hotel Savery, Mrs. L. R. Hegg, presiding

Luncheon Music—Mrs. Eugene Smith, VI

Invocation—Solo: "The Lord's Prayer" by Mrs. C. W. Losh, Jr., V

Accompanist, Mrs. H. C. Merillat

Introduction of Guests

G. V. Caughlan, M.D., president of the Iowa State Medical Society

L. A. Coffin, M.D., president-elect of the Iowa State Medical Society and chairman of the Woman's Auxiliary Advisory Board

W. L. Downing, M.D., Member of the Advisory Board

R. F. Birge, M.D., secretary of the Iowa State Medical Society

Donald L. Taylor, executive secretary of the Iowa State Medical Society

Elmer Hess, M.D., president-elect of the American Medical Association

"Auxiliary Activities in the Preservation of Democracy"—Mrs. C. R. Pearson, Baraboo, Wis-

consin, national chairman of Nurse Recruitment
Report of Achievement Awards and Exhibit Contest—Mrs. V. W. Petersen, VII
Report of Registration Committee—Mrs. R. E. Hines, V
Courtesy Resolutions—Mrs. W. C. Friday, VIII
Installation of Officers—Mrs. C. R. Pearson
Inaugural Address—Mrs. C. H. Flynn
Presentation of Past-President's Pin—Mrs. E. B. Hoeven, past-president
3:00 "There's a Doctor in the House"—skit presented by members from District VI
4:00 Post-Convention Board Meeting, East Room, Hotel Savery, Mrs. C. H. Flynn, presiding
7:00 Banquet, Grand Ball Room, Hotel Fort Des Moines

Roman numerals represent councilor districts.

FUTURE NURSES CLUBS

Monday, April 25

8:00 Registration, Des Moines Room, Hotel Savery
9:00 Group Discussions, Des Moines Room, Hotel Savery
Programs, Pinning Ceremonies, Teas, Scholarships and Loan Funds
11:00 Presentation of Clubs to the Woman's Auxiliary, Terrace Room, Hotel Savery
"Nursing in Other Lands"—Mrs. C. M. Hipwood, R.N.
12:00 Luncheon, Des Moines Room, Hotel Savery
1:00 Tour of Mercy Hospital and Mercy Nurses' Home Tea, Mercy Nurses' Home, courtesy of Mercy Hospital Guild

LINES FROM THE PRESIDENT

In this, my last AUXILIARY NEWS message, I pay sincere tribute to the superb record of service and the loyal support of every officer and committee chairman, state and county, with whom I have been privileged to work, and to all Auxiliary members. Fine letters of encouragement and extraordinarily good reports from them have given me reason to believe that our Iowa Woman's Auxiliary is one of the best in the nation. Growth in friendship and understanding of objectives have strengthened our determination to work together.

It is too early to summarize the progress that has been made in organization, but this I do know—that we have reached an all time high in membership of Future Nurses Clubs; the sales of TODAY'S HEALTH have been extremely good; meetings have been held in all districts; and several new Auxiliaries are being organized and the addition of some new members-at-large will contribute to a fine record for our annual report. "Leadership in Community Health," the Auxiliary's theme for the year, has given a stimulus to us physicians' wives to play an increasingly important part in community life.

Thank you, one and all, for a most enjoyable year as your president, and for the friendships that I shall treasure all the rest of my life. I hope to see and greet all of you at the convention in Des Moines, April 24-26. A fine program has been planned for your enjoyment. Send in your reservations now!

MRS. LESTER R. HEGG
President

THIRD DISTRICT

Mrs. Frank D. Edington, councilor for the Third District, reports nine members-at-large in O'Brien County and three in Dickinson. All counties have elected officers and expect to have representatives at the annual meeting. Clay County took its Future Nurses Club to Sioux City on a hospital tour March 4, and will take at least some of the members to Iowa City later in the spring.

COUNTY AUXILIARIES

Black Hawk

The February meeting of the Black Hawk County Auxiliary was held at the home of Mrs. W. H. Acker, in Waterloo, with 48 members present. Following a buffet supper, a business meeting was held at which Mrs. Carl Hanson presided in the absence of the president, Mrs. Herbert Shulman.

The chapter had a tea for the Future Nurses Clubs of the county at the Waterloo Woman's Club on February 26. Hostesses were Mrs. J. F. Gerken, Mrs. Eugene Smith and Mrs. R. D. Acker.

Osceola

The Osceola County Auxiliary sponsors Hospital Day annually at the local hospital. An invitation is extended to all interested groups to visit the hospital, and light refreshments are served.

Mrs. Herbert Paulsen was instrumental in the organization of the Future Nurses Club. It has ten members, and she acts as its advisor. Two young women have entered nurses' training as a result of their membership in the group.

The chapter is tentatively planning to invite Auxiliary members throughout the district to a meeting at Sibley in the fall.

Polk

The February meeting of the Polk County Medical Auxiliary was held in the Garden Room of the Hotel Kirkwood, in Des Moines, on the fourteenth. Plans were discussed for the benefit bridge party which is to be held in March and from which proceeds will be used for the Future Nurses clubs. There was also some discussion of plans for the handicapped sale to be held in Des Moines in April, under the sponsorship of the chapter. Special recognition was given to all new members of the Auxiliary. The group heard a review of the book "Duveen" given by Mrs. Louis Goldberg.

TRENDS IN NURSING

At the winter meeting of the Executive Board of the Woman's Auxiliary to the Iowa State Medical Society, Dean Myrtle E. Kitchell, of the College of Nursing at SUI, reported that although there has been a steady increase in nursing graduates in the United States, the increase cannot keep up with the demand.

In making a study of nursing problems, she said, some means must be found for evaluating the curricula of the schools. The role of the professional nurse must also be studied, and some plan must be evolved for utilizing her services as effectively as possible. Nurse recruitment must be broadened to include enlisting students for practical nursing, physiotherapy, dietetics and laboratory technology. The ANA Committee on Careers in Nursing, she declared, now feels that high school pupils should be informed about all of those health fields.

Three trends are evident currently: (1) collegiate education; (2) junior college education; and (3) education for the practical nurse. Twelve per cent of nursing students are enrolled in institutions of collegiate grade, and, in Dean Kitchell's opinion, that percentage should be increased to 20 or 30, if the future need for teachers of nursing and for public health nurses is to be met. At the present time, less than two per cent of the women enrolled in colleges are taking nursing courses.

Dean Kitchell expressed the belief that liberal arts training which only colleges are capable of giving should precede or accompany professional education in nursing. The State University of Iowa has joined other Universities, such as the University of Minnesota, the University of Washington and Vanderbilt University, in offering a 4-year program leading to the baccalaureate degree. Elsewhere in Iowa, there are three collegiate nursing education programs in which a considerable amount of liberal arts training is included: (1) Briarcliff College, in Sioux City; (2) Jenny Edmundson Hospital, in Council Bluffs; and (3) St. Ambrose College, in Davenport.

An experiment is going on, Dean Kitchell said, in which junior colleges are offering nursing education and are using local hospital facilities for clinical laboratory work. Tests of graduates have been quite gratifying, but some people feel that the junior college set-up is a threat to hospital nursing schools. The principal advantage of junior college education for nurses is that the cost is carried by school taxation, and since costs of nurse education are, otherwise, passed on to the patient, junior college education for nurses would mean a reallocation of some of the cost of illness. The experiment in junior college nursing education is a 5-year program financed by a Rockfeller grant.

Professional nurses are endorsing the program for educating practical nurses, Dean Kitchell informed the Executive Board of the Auxiliary. Fourteen southern states have large programs, in some instances conducted by the state boards of vocational education. Three practical nursing courses are being carried on in Iowa—one at the University, one in Cedar Rapids and one in Marshalltown.

Future Nurses clubs, she thinks, are the best recruitment device. Iowa has received national recognition for its strides in this field. All phases of nursing should be endorsed, and balanced information should be given to students as regards the three sorts of nursing education courses now available. A prospective student, Dean Kitchell maintains, should know that nursing isn't glamorous, but she should be told that even though it is hard work it is highly rewarding. She should be led to consider the costs, the school life and the type of faculty that she would find at each of the schools that she has a chance of attending.

In a survey conducted by the National League for Nursing, Dean Kitchell reported, it was discovered that 30 per cent drop out of nurses' training before they finish—⅔ of those during the first year. The 2-year college course is very difficult for the students. Occasionally the faculty finds students overworked or lacking in motivation, and there are instances in which the students haven't been adequately screened.

There are good reasons for starting nurse recruitment very early indeed. It has been found that as many as 38 per cent of prospective students have made a final choice of occupation before finishing the eighth grade; 30 per cent decide during grades nine, ten and eleven. Some choose nursing after visiting nursing schools, and others follow the advice of parents, nurses, physicians or other friends. Eighty-seven per cent have altruistic purposes; 81 per cent want a career; 30 per cent want independence and preparation for marriage; 8 per cent want to please their families or friends; and 2 per cent choose nursing schools because they can't afford to undertake another sort of higher education.

Dean Kitchell believes that loan facilities for student nurses are serving an important function. Women, she says, are reluctant to involve themselves in debt, but in many instances their only alternative other than borrowing is giving up the idea of college. There is a trend toward the granting of tuition scholarships by the hospitals that maintain their own schools. But those scholarships aren't always available to beginning students, and there are many capable girls who can't last through the first year without financial help.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529-36th Street, Des Moines 12, Iowa.

THE NEED FOR NUTRITION RESEARCH

In an address that he delivered recently, Dr. Wm. B. Bean, head of the Department of Internal Medicine at SUI pointed out the need for subsidies to support research in nutrition problems. "Because the theme of nutrition runs steadily as an undercurrent in most problems of health and disease," he declared, "the matter urgently needs the attention of industry, of government, of foundations and of other organizations which provide means for scientific research."

We take vitamins out of foods in the process of refining them, he said. Then we put back a small fraction of what we took out, and call the end product "enriched" or "fortified." A further difficulty results from what he has named "vitamania." Wanting to find elixirs of life and panaceas for diseases, men and women buy packets of vitamins, swallow them and wait patiently for miracles.

The following are some of the important problems in American nutrition that Dr. Bean thinks are most in need of solution: (1) the consumption of highly refined foods that provide too many calories stripped of their natural complement of vitamins and minerals; (2) the high intake of fats, which are believed to increase man's chances of developing arteriosclerosis; (3) the effects of various foods upon health, aging and disease; (4) the functions of specific vitamins; and (5) specific indications for the administering of supplementary vitamins.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa
Thursday at 11:15 a.m.

"THE STORY BEHIND THE DISCOVERY"

April 7 ..... The Gangster and the Rodent
April 14 ..... The Perfect Specimen
April 21 ..... The Dog He Never Had
April 28 ..... The Cow and the Bell

WSUI—Iowa City, Iowa
Tuesday at 11:45 a.m.

"PHYSICAL MEDICINE"

April 5 ..... Hearing Aids
April 12 ..... Radioactive Substances
April 19 ..... In Bed or Out
April 26 ..... Occupational Therapy

TELEVISION

WOI-TV—Ames, Iowa
Thursday at 8:30 p.m.

April 28 .... Highlights of the Iowa State Medical Society's Annual Meeting

KGLO-TV—Mason City, Iowa
Sunday at 5:30 p.m.

April 10 ..... How to Take Care of Your Baby at Home
April 24 ..... Birth Injuries

COLORADO U. STARTS PRACTICAL COURSE

A newly instituted course entitled "The Practice of Medicine" at the medical school of the University of Colorado is intended to give students practical advice on the situations they will face at the start of their careers, according to an article by Dr. Gertrud Weiss in the March issue of MEDICAL EDUCATION.

Offered in the junior year, the course covers such problems as choice of locality and office space, relations with other doctors, patients' attitudes and the business end of medical practice. The question of whether or not to specialize is discussed by a panel consisting of a general practitioner, an obstetrician, a pediatrician and an internist. Also, two general practitioners are brought from small communities to describe their situations. Dr. Weiss points out that although about half of the medical students at Colorado subsequently enter general practice, no previous opportunities had been provided for them to meet and talk with men engaged in that branch of medicine.

Students have requested some of the lecturers to meet with them privately to continue discussion of their topics.

MEDICAL SCHOOLS ARE GROWING

By 1960, the nation's medical schools should be graduating 7,300 to 7,500 physicians each year, according to a report made by Dr. E. L. Turner, secretary of the AMA Council on Medical Education and Hospitals.* In the past 54 years, the nation's population has doubled, but approved medical school graduations have increased 114.6 per cent. Actually, Dr. Turner says, one out of every 1.97 applicants to American medical schools was admitted in 1953-54, the latest year for which statistics are available. The public, however, has been confused and has been made to think that admission is difficult to achieve, as a result of the fact that 14,678 pre-med students filed 48,556 applications. In other words, every student seeking to get into medical school applied to an average of 3.3 schools.

* Turner, E. L.: Facts about medical students. J.A.M.A., 157:903-906, (Mar. 12) 1955.

LOCUM TENENS

Physicians who are seeking men to carry on their work for several weeks this summer are invited to state their needs to the Placement Bureau of the Iowa State Medical Society.

The Bureau already has received applications from several doctors who would like to have temporary locations.

COUNTY SOCIETIES

MEETINGS

Calhoun

At the February 3 meeting of the Calhoun Medical Society in Manson, Dr. Ralph H. Heeren, deputy commissioner and director of the Division of Tuberculosis Control of the Iowa State Department of Health, was the principal speaker. Miss Joy Harmon, consultant, and Miss Bernice Beals, casefinding coordinator, from the State Department, were also present and contributed to the discussion of the new tuberculosis casefinding program that has been proposed for Calhoun and Pocahontas counties.

Clayton

Dr. H. H. Ennis, of Manchester, was guest speaker at a meeting of the Clayton County Medical Society in Guttenberg on February 28.

Des Moines

Dr. Mark Wheelock, formerly of Burlington, was guest speaker at the February 8 meeting of the Des Moines County Medical Society at Hotel Burlington. He is an associate professor of pathology at the Northwestern University Medical School, and the subject of his address was "Extra-Nodal Lymphomas."

Emmet

Members of the Emmet County Medical Society were hosts at a joint meeting of physicians, surgeons and dentists at the Holy Family Hospital, in Estherville on February 7. Dr. Merle Hale, professor and head of the Department of Oral Surgery at the SUI College of Dentistry spoke on "Autogenous Transplant of Teeth."

Fayette

Dr. W. A. Tice, a Waterloo psychiatrist, was guest speaker at the March 8 meeting of the Fayette County Medical Society, in Oelwein.

Johnson

Mr. Wilbur R. Quinn, director of the Physicians Relations Department of Iowa Medical Service, spoke to the Johnson County Medical Society on March 2, on "Blue Shield and Socio-Economic Trends in Medicine."

Marshall

On Tuesday, April 5, the Marshall County Medical Society will hear Dr. Paul M. Seebohm, of the State University of Iowa, discuss "Extrinsic Allergic Conditions of the Respiratory Tract."

O'Brien

Officers of the O'Brien County Medical Society elected at a meeting in Primghar on February 2 include: Dr. Ivan Brown, of Hartley, president; Dr. C. E. Vorhes, of Sheldon, vice-president; and Dr. W. S. Balkema, of Sheldon, secretary-treasurer.

Osceola

New officers of the Osceola County Medical Society, elected at a meeting in Sibley on February 10, are: Dr. F. B. O'Leary, president; Dr. J. H. Thomas, Jr., secretary; and Dr. O'Leary, delegate to the Iowa State Medical Society.

Polk

At the meeting of the Polk County Medical Society at 6:30 p.m. on April 20, at the Savery Hotel, in Des Moines, Dr. G. O. Proud, of the University of Kansas Medical Center, will discuss "Indication for Adenoidectomy and Tonsillectomy."

Scott

Dr. Robert M. Hosler, of Cleveland, Ohio, is to address the Scott County Medical Society on Tuesday, May 3 on "The Prevention and Management of Cardiac Arrest." Dr. Hosler is one of the foremost authorities in the country on this matter and recently has published a manual dealing with it.

The dinner that precedes the meeting, at the Outing Club, Davenport, will be served at 6:00 p.m., and the scientific program is scheduled to begin at 7:00. The members of all county societies in the state are cordially invited.

Wapello

At the regular meeting of the Wapello County Medical Society on March 1, Dr. Robert C. Hickey,

of University Hospitals, Iowa City, spoke on "Tetanus and Gas Gangrene."

Woodbury

Dr. H. A. Press, assistant director of medical services for the National Foundation for Infantile Paralysis, spoke to the Woodbury County Medical Society on "Latest Developments in Prevention of Polio," at its meeting on March 10.

Worth

At its meeting on January 30, the Worth County Medical Society elected Dr. R. L. Olson, of Northwood, president, and Dr. Charles T. Bergen, of Northwood, secretary-treasurer, for 1955.

DEATHS

Dr. Harry Alexander Stribley, 61, a Dubuque physician and surgeon, died at his home on February 7 after a few days' illness.

Dr. Robert Fred Throckmorton, 85, a resident of Des Moines for 37 years, died at his home there on February 18. He was a Life Member of the Iowa State Medical Society.

Dr. Joseph H. Gamet, 50, director of student health at Iowa State Teachers College, Cedar Falls, died following surgery at Rochester, Minnesota, on February 17. Apparently he was reacting favorably in spite of a known heart condition until the failure occurred.

Dr. Frank LeMoyne Smith, 88, who practiced first at Monroe and afterwards, for about 25 years, at Newton, died in his sleep at a Newton hospital on February 17. He had been living in retirement at Rensselaer, New York, and contracted pneumonia while visiting his daughter at Eagle Grove, Iowa.

Dr. Hans Hansen, 76, of Logan, died at a Council Bluffs hospital on February 22, of a heart ailment. He had engaged in only limited practice since 1948.

Dr. Gilbert Francis McCullough, 72, of Davenport, died on February 11, of myocardial infarction. A graduate of Notre Dame and the school of medicine at Northwestern University, he practiced until about 1930, when he retired because of ill health.

Dr. William B. Armstrong, 63, a general practitioner at Ames, died suddenly on March 5, following a heart attack.

Dr. Sherwood Benjamin Zoller, 70, who had practiced medicine at Fredericksburg for 43 years, died at St. Joseph Hospital, New Hampton, on March 2. Throughout most of the winter he had been hospitalized at Iowa City.

Dr. Howard Osborn Young, 69, of Spokane, Washington, who practiced for 25 years at Thornton, Iowa, died on February 22, following a heart attack.

Dr. Robert Thomas Lenaghan, 56, a Clinton radiologist, died suddenly at his home on February 25.

AGAMMAGLOBULINEMIA MAY FACILITATE TISSUE TRANSPLANTS

Two Minneapolis physicians, Drs. R. A. Good and R. L. Varco, reported in the February 26 J.A.M.A. that they have succeeded in transplanting skin from a normal individual to the leg of a patient with agammaglobulinemia. In consequence, they suggest that the immunologic mechanisms in the human body may be the ones that ordinarily doom attempts at transferring skin or other organs from one individual to another.

They said that a transplant of skin from their patient to a normal child who had been badly burned was a failure, and that, except for a few questionable instances, such transplanting has hitherto been successful only between identical twins and among experimental animals.

They suggested that investigators would do well to concentrate on finding methods to control or temporarily minimize the body's defenses against infection in the hope of making it possible to replace not only skin but other vital organs in severely injured patients.

ALLERGISTS HOLD ANNUAL MEETING

The Eleventh Annual Congress and Graduate Instructional Course in Allergy of the American College of Allergists will be held at the Morrison Hotel, Chicago, April 25-30, 1955. The 40 hours of lectures offered on the first three days will hold the interest of physicians in general practice, who are finding that more than five per cent of the people who consult them have allergic components in their illnesses. The last two days will be devoted to more advanced clinical papers and to reports of research.

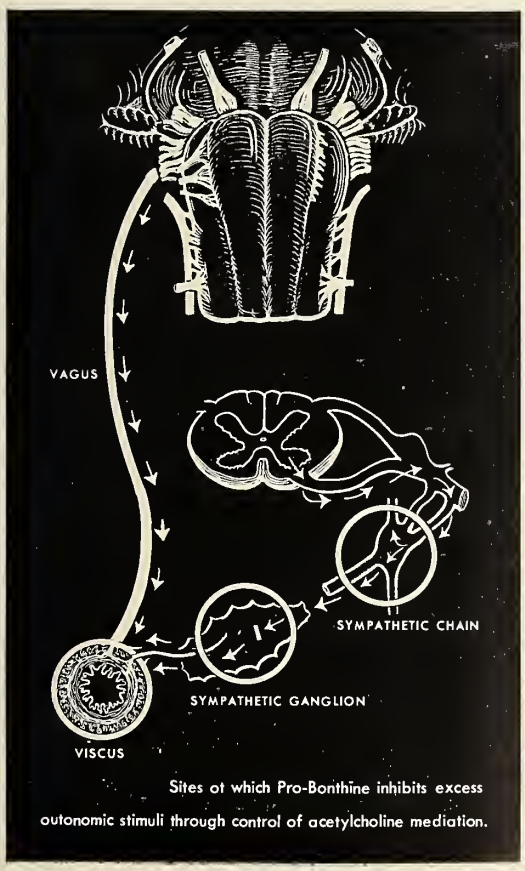
PRO-BANTHĪNE® FOR ANTICHOLINERGIC ACTION

A Combined Neuro-Effector and Ganglion Inhibitor

Pro-Banthīne consistently controls gastrointestinal hypermotility and spasm and the attendant symptoms.

Pro-Banthine is an improved anticholinergic compound. Its unique pharmacologic properties are a decided advance in the control of the most common symptoms of smooth muscle spasm in all segments of the gastrointestinal tract.

By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use[1] in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.



Sites of which Pro-Banthine inhibits excess autonomic stimuli through control of acetylcholine mediation.

Roback and Beal[2] found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents.

In Roback and Beal's[2] series "Side effects were almost entirely absent in single doses of 30 or 40 mg. . . ."

Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

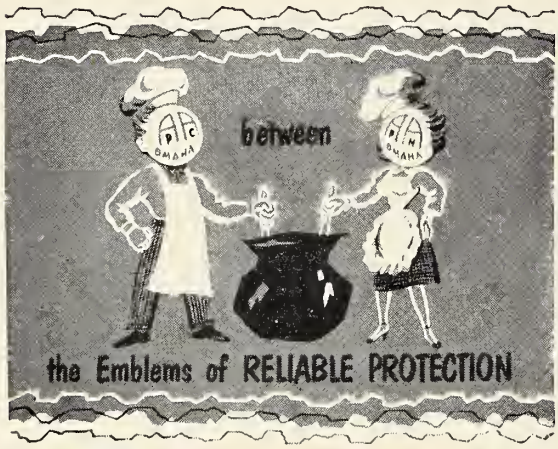
For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

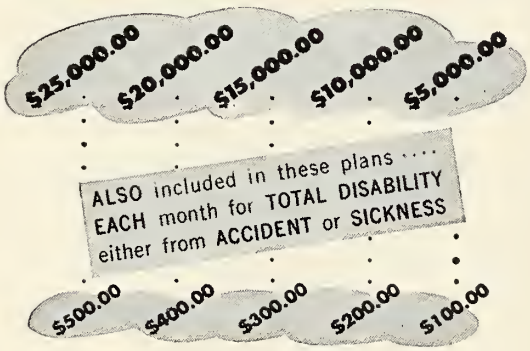
SEARLE

Something NEW is Cooking



MORE INSURANCE NOW AVAILABLE

think! HOW THESE AMOUNTS WOULD HELP IN PAYING ESTATE TAXES IN CASE YOU ARE ACCIDENTALLY KILLED . . .



SPECIFIC BENEFITS ALSO FOR LOSS OF SIGHT, LIMB OR LIMBS FROM ACCIDENTAL INJURY
HOSPITAL INSURANCE also for our members and their families

$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

The Month in Washington

Washington, D. C.—Before Congress, and getting some attention but almost no action, is the Hoover Commission's report on federal medical services. Most controversial question is how much medical care the federal government should give to veterans whose disabilities are not a result of their military service. This is ground that has been well plowed before, by the first Hoover Commission, by various studies and reports and most recently by the AMA's campaign to educate the profession on the non-service-connection situation.

Apathy of Congress may be explained in part by decision of the White House, the week after release of the Commission report, to appoint a commission to inquire into the whole field of veterans' benefits. The group, headed by Gen. Omar Bradley, former V-A administrator, is not expected to complete its study until next fall.

A Medical Task Force (14 physicians and one dentist) did most of the spadework for the Hoover Commission. Publication of its report showed that not all the recommendations of the Task Force were accepted by the full Commission. The most notable differences came in veterans' medical care. The Task Force concluded that what is most urgently needed is a firm legal basis for determination of eligibility for medical care. Its solution would be to end eligibility for non-service-connected care three years after separation from service. The Task Force declared that " the very normal incident of fulfilling the duties required of every citizen" should not entitle part of the population to lifelong medical care. The three-year limit, according to the Task Force, would reduce the potential V-A patients from 17.5 million to 3 million, at an annual saving of $150 million. The Commission would not go along with this on the theory that "the sentiment of the American people is that a sick and really indigent veteran should be provided care in V-A hospitals." Instead it recommended that:

(1) the inability-to-pay statement for non-service care be "subject to verification," (2) a veteran assume an interest-free liability to pay for such care at some future date "if he can do so," (3) the V-A close down 20 hospitals, mostly general medical and surgical, (4) outpatient care be furnished indigent veterans with non-service disabilities, and (5) all veterans laws be brought together into a single code.

The American Legion labeled the Hoover Commission recommendations as "heartless," and "unworthy of serious consideration by informed people." Through Secretary and General Manager George F. Lull, the American Medical Association made these points: (1) closer screening of financial statements already has proved to be ineffective,

The individualized formula is the foundation of the infant's health and future well being



Karo Syrup...a carbohydrate of choice in "milk modification" for 3 generations

Ideal practice dictates periodic adaptation of the individualized formula to the growing infant rather than the infant to the formula. With Karo, milk and water in the universal prescription, the doctor can readily quantitate the best formula for the infant. A successful infant formula thus lays the foundation for early introduction of semi-solid foods in widening the infant's spectrum of nutrients.

Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized. It is a balanced fluid mixture of maltose, dextrins and dextrose readily soluble in fluid whole or evaporated milk. *Precludes* fermentation and irritation. Produces no intestinal or hypoallergenic reactions. Bacteria-free Karo is safe for feeding prematures, newborns, and infants —well and sick.

Light and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.



CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

Behind each bottle three generations of world literature

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates, Spring 1955

SURGERY—Surgical Technic, Two Weeks, April 18, May 2
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, June 6
Surgical Anatomy & Clinical Surgery, Two Weeks, June 20
Surgery of Colon & Rectum, One Week, May 9
General Surgery, Two Weeks, April 25; One Week, May 23
Gallbladder Surgery, Ten Hours, June 27
Thoracic Surgery, One Week, June 6
Esophageal Surgery, One Week, June 13
Fractures & Traumatic Surgery, Two Weeks, June 13

GYNECOLOGY—Office & Operative Gynecology, Two Weeks, April 18, June 13
Vaginal Approach to Pelvic Surgery, One Week, May 2

MEDICINE—Two-Week Course May 2
Electrocardiography & Heart Disease, Two Weeks, July 11
Gastroenterology, Two Weeks, May 16
Dermatology, Two Weeks, May 9
Hematology, One Week, June 13

RADIOLOGY—Diagnostic Course, Two Weeks, May 2
Clinical Uses of Radio Isotopes, Two Weeks, May 2
Radium Therapy, One Week, May 23

PEDIATRICS—Intensive Course, Two Weeks, April 11
Clinical Course, Two Weeks, by appointment
Neuromuscular Diseases, Two Weeks, June 20

UROLOGY—Two-Week Urology Course, April 18
Ten-Day Practical Course in Cystoscopy every two weeks

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 S. Wood St., Chicago 12, Ill.

ANNOUNCEMENT . . .

L. E. McCleary of Des Moines, medical service representative for the Zemmer Co., Pittsburgh, Pa., for the past several years, and secretary of the Iowa Drug Travelers, is now associated with the Kay Pharmacal Company as Iowa representative.

As a wholesaler of ethical pharmaceuticals since 1938, it has been our privilege to serve the profession in New Mexico, Texas, Oklahoma, Arkansas, Missouri and Kansas.

Now that we have extended our services to cover Iowa, you are cordially invited to make the Kay Pharmacal Company your source of supply for ethical products of merit.

Samples and literature of the various Kay specialties, as well as the specialties and standard items of the many nationally recognized manufacturers, whom we represent, are available on request for clinical use. Mr. McCleary will be glad to detail any of these products and leave any desired material with you. Any products detailed will be placed in the drug store of your choice, if you so desire.

"ETHICAL PRODUCTS OF MERIT"

KAY PHARMACAL CO.

1312 N. Utica • P. O. Box 6098
TULSA, OKLAHOMA

(2) rejecting the Task Force plan for a three-year cutoff while offering outpatient care would skyrocket costs and defeat the commission's goal of eliminating wasteful spending and unnecessary intrusion by the government in private affairs.

The Commission has other equally important, if not as controversial, proposals. Among them are: closing down of general medical hospitals of the Public Health Service, elimination of free medical care for merchant seamen, extension of contributory health insurance to military dependents and other U. S. beneficiaries along lines of the proposed program for federal civilian employees, regionalization of military hospitals with one department in command of all hospitals in each area, creation of a Federal Advisory Council of Health with physician and lay members who would advise the President on both governmental and national health problems, and creation of a National Medical Library out of the present Armed Forces Medical Library. Copies of both Commission and Task Force reports are available at the Government Printing Office, Washington 25, D. C.

Secretary Hobby of the Department of HEW, testifying on all the administration's proposals, opened a series of health hearings before the House Interstate and Foreign Commerce Committee. Pressed to make a choice, she indicated that the two most important parts of the six-part omnibus health bill were reinsurance of health plans and federal guarantee of mortgages for health facilities.

But the committee decided that first priority should go to mental health proposals. Accordingly the following week it started hearings on that part of the omnibus bill calling for a 5-year program of grants to states for mental health projects. Also before the committee was the chairman's bill for a national study of mental illness problems, to be financed by the U. S. but conducted by private groups.

Holding priority on the Senate side was legislation for a 5-year, $250 million program for aid to medical schools, sponsored by Chairman Hill of the Labor and Public Welfare Committee.

WOI-TV SERIES RESUMES APRIL 28

The first in the new series of Iowa State Medical Society half-hour television programs (Thursdays at 8:30) is to be broadcast on April 28 over WOI-TV, Ames.

As highlights of the Annual Meeting of the Iowa State Medical Society, just the day after its conclusion, filmed interviews with guest speakers and excerpts from House of Delegates and reference committee meetings will be presented on that program, in order to give the public a notion of the workings of organized medicine at the state level.

With "Premarin," relief
of menopausal distress is
prompt and the "sense of well-being"
imparted is highly gratifying
to the patient.

"Premarin"® —Conjugated Estrogens (equine)

5513

SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 Capacity 200 beds

Under the Supervision of the Sisters of Mercy

An Institution for the Study and Treatment
of Nervous and Mental Disorders.

Conditioned Reflex and Antabuse Therapy
for Alcoholism

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director
JAMES D. MAHONEY, M.D., Associate Director RICHARD B. LEANDER, M.D.

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

PERSONALS

Dr. Don G. Bock, a specialist in internal medicine and cardiology, has begun practice in Fort Dodge. A 1947 graduate of the school of medicine at Indiana University, he served an internship and, immediately thereafter, a three-year residency at Methodist Hospital, Indianapolis. Since then, he has been in military service, serving in Japan and Korea and in two stateside military hospitals, and attaining the rank of major.

Dr. Robert Albaugh, who has been associated with **Dr. James Coddington** in practice at Humboldt since last October, has accepted a research assignment on the Pacific island of Eniwetok. He is to be employed by Holmes and Narver, an engineering firm whose work is under the supervision of the U. S. Atomic Energy Commission.

Dr. Richard A. Eckberg, of Hubbard, left to begin a tour of military duty on March 1. His practice is to be continued by **Dr. H. Borre**, who discontinued work in Red Oak about 18 months ago, announcing his intention to operate a motel in Walker, Minnesota. For the past several months, he has been a staff physician at the Clarinda Mental Health Institute.

At the sectional meeting of the American College of Surgeons held in Cleveland during March, **Dr. R. T. Tidrick**, of the College of Medicine at SUI, presented a film made at Iowa City showing an operation to correct abnormalities of the bile duct in the newborn.

Dr. Robert A. Powell, of Shenandoah, was at Tulane University, New Orleans, in late February and early March taking a three-weeks short course in obstetrics.

An honorary fellowship in the Royal Sanitary Institute of Great Britain has been granted to **Dr. Walter L. Bierring**, former Iowa State Health Commissioner and now director of the Division of Heart and Chronic Diseases in the State Health Department. The citation on the scroll that has been sent to him refers to his "distinguished work in connection with sanitary science." He is the twenty-second American to be so honored.

On February 23, **Dr. William B. Bean**, head of the Department of Internal Medicine at the SUI College of Medicine, delivered two lectures and gave demonstrations at a clinic on vascular dis-

eases of the skin in Buffalo, New York. One of the addresses was that sponsored annually at the University of Buffalo by Alpha Omega Alpha.

Dr. John W. Eckstein, associate in the Department of Internal Medicine at SUI, has been designated a special research fellow of the Heart Institute, a branch of the United States Public Health Service, to work next year on problems of blood circulation in the extremities, and **Dr. James E. Odell,** instructor in the Department of Pediatrics has been awarded a post-doctoral research fellowship by the federal agency's Institute of Research to study blood circulation through the lungs.

Dr. George S. Anderson, currently on the staff of the V-A Hospital at Iowa City, will join the Department of Internal Medicine at SUI in July to work in the Cardiovascular Laboratory. He has been awarded a research fellowship by the American Heart Association to work on problems of congenital heart disease.

On February 18, the State Industrial Commission denied a workman's compensation claim made by **Dr. Robert Moerke,** of Burlington, against the Silas Mason Company, on the grounds that a preponderance of medical testimony had not supported his contention that X-ray radiation from incompletely insulated apparatus at the Iowa Ordnance Plant, where he worked from November, 1948, until October, 1952, was responsible for his contracting chronic myelogenous leukemia.

On April 2, **Dr. J. N. Patterson,** of Burlington, will have completed 65 years in the practice of medicine. At the age of 90, he is still regular in his maintenance of office hours. He is a Life Member of the Iowa State Medical Society.

Dr. E. M. Grady, a 1933 graduate of the medical school at Creighton University who practiced briefly at Portsmouth in the mid-thirties and since then has practiced in Seattle, opened an office at West Bend in February.

Dr. Gordon Cherwitz, a pediatrician, has joined the staff of the West Davenport Clinic. He received his medical and specialty training at Creighton University and its affiliated hospitals, in Omaha.

On February 8, **Dr. J. W. Jordan,** of Maquoketa, suffered lip lacerations, facial bruises and a bruised knee in an automobile collision near his home town. The driver of the other car has been charged with reckless driving for having failed to return to the right-hand lane after passing another automobile.

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

Dr. C. E. Block, a Davenport physician and surgeon, suffered a heart attack at his office on February 14.

Dr. H. Dabney Kerr, head of the Department of Radiology at SUI, will leave there on July 1 to join the X-ray division at the Anne Arundel General Hospital in Annapolis, Maryland, and to serve as consultant in a new radium therapy service at Memorial Hospital, Easton, Maryland.

Dr. George Robinson, of Hudson, who has been a patient at University Hospitals in Iowa City for some time, has announced that he will reopen his office on about April 1.

On April 4, **Dr. Paul F. Tempel** will begin practice at Charles City with **Dr. Werner P. Pelz.** Dr. Tempel has been located at Steamboat Rock.

Dr. Harold Margulies, of Des Moines, addressed the Arizona Heart Association, in Tucson on February 17, on "Cardiac Catheterization and Angiocardiography in a Private Hospital."

On February 21, **Dr. John Uchiyama,** of Des Moines, resumed practice after two years of duty with the Air Force.

On March 1, **Dr. Philip J. Monnig** associated himself with **Dr. Carl A. Jacobs** in the practice of general and thoracic surgery in Sioux City. Dr. Monnig has been a member of the staff of the V-A Hospital in Des Moines.

Dr. James L. Coffey, of Fairfax, Missouri, joined **Dr. Paul O. Nelson** in practice at Emmetsburg on March 14.

Dr. H. E. Stroy, of Osceola, has announced the association with him of **Dr. George B. Bristow,** who recently completed a residency in surgery at the Kansas City General Hospital.

Dr. Roger L. Augspurger, who recently completed a tour of military service, is beginning practice in Sigourney.

Medical Associates, of Dubuque, has announced the affiliation of **Dr. Robert T. Melgaard,** a pediatrician.

Dr. Thomas A. Burcham, of Des Moines, has been appointed radiological consultant to the Office of Civilian Defense. During World War II, Dr. Burcham was chief surgeon for the O.C.D. for Iowa.

Announcing

A SEMINAR ON HYPNOSIS

Intensive course on all Clinical Applications of Hypnosis

May 19, 20, 21, 22, 1955

Conrad Hilton Hotel, Chicago, Illinois

TECHNIQUES OF INDUCTION—HYPNOTHERAPY—HYPNODONTIA

Limited to Physicians, Dentists, and Clinical Psychologists

INSTRUCTORS

MILTON ERICKSON, M.D., Psychiatry
WILLIAM S. KROGER, M.D., Obstetrics and Gynecology
SEYMOUR HERSHMAN, M.D., General Practice
IRVING SECTER, D.D.S., Dentistry
WILLIAM T. HERON, Ph.D., Clinical Psychology

For Further Information Write:

Chicago School of Medical and Dental Hypnosis

Miss Pat McFate, Registrar
333 North Michigan Avenue
Chicago, Illinois—FRanklin 2-7100



Eye ground changes after Keith-Wagener-Barker classification

In hypertension, effective reduction of blood pressure is assured in 90% of appropriate cases when dosage is fitted to the requirements of the individual patient. Response is reliable, uniform, prolonged. By-effects are minimal. Convenient t.i.d. oral tablet medication.

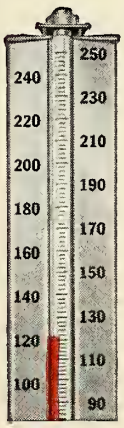
There is usually regression in retinal vascular changes, resorption of exudates, subsidence of papilledema, and improvement in vision.

For a clinical supply of 20 mg. Ansolysen Tablets, sufficient to initiate therapy for two patients, write on your prescription blank to Wyeth Laboratories, Professional Service Department A-6.

Supplied in scored tablets of 20, 40, and 100 mg., bottles of 100. Also available: Injection, 10 mg. per cc., vials of 10 cc.

ANSOLYSEN®

TARTRATE (Pentolinium Tartrate)



ALWAYS LOWERS BLOOD PRESSURE

Wyeth®
Philadelphia 2, Pa.

Dr. Edward Luke, of Coin, observed the fiftieth anniversary of his beginning medical practice on March 1. A Life Member of the Iowa State Medical Society, Dr. Luke has somewhat limited his work. He and his wife will start on a vacation trip to California on April 19.

Dr. Werner Pelz, of Charles City, is head of a newly formed northeast Iowa organization of sports car enthusiasts. He purchased a Porschuh during a trip to Europe last year.

Iowa's two U. S. Senators and eight members of the House of Representatives were hosts at dinner in Washington, D. C., on March 7, to a delegation from the Iowa State Medical Society consisting of **Dr. F. C. Coleman,** of Des Moines, **Dr. J. C. Conner,** of Nevada, **Dr. B. T. Whitaker,** of Boone, and **Mr. Robert B. Throckmorton.**

On July 1, **Dr. Ray Robinson,** a 1954 graduate of the College of Medicine at SUI who is now an intern at Broadlawns Polk County Hospital, Des Moines, will join **Drs. Byron Biersborn** and **Charles Sokol** in practice at State Center.

Dr. Milo A. Mochal has left Decorah to undertake a residency in internal medicine at the V-A Hospital in Iowa City.

Dr. J. H. Walston, formerly of Graettinger, has entered private practice at St. Cloud, Minnesota, following the completion of his military service.

In July, **Dr. Fred Roules,** a recent graduate of the College of Medicine at SUI who is interning at Broadlawns Polk County Hospital, Des Moines, will begin practice in Mediapolis.

The National Council to Combat Blindness, Inc., has made a $2,000 grant to **Dr. H. M. Burian** and a $1,500 grant to **Dr. P. J. Leinfelder,** both of the Department of Ophthalmology at SUI. This is the fourth such subsidy that the Council has given Dr. Burian for his research.

Drs. Walter M. Kirkendall and **Richard E. Peterson** will conduct a two-year study, under a $13,000 grant made to SUI by the National Heart Institute, in an effort to discover how inactivation of the thyroid gland benefits patients suffering from heart disease.

Dr. James O. Merritt, of West Des Moines, has announced that he will maintain office hours each weekday in Waukee.

THE RETREAT HOSPITAL

Des Moines, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
MARTIN J. KRAKAUER, Psychologist
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist

SYDNEY L. MACMULLEN, Administrator
HERBERT W. VETTER, Asst. Administrator

2801 Woodland Ave. **Phone 5-2121**

Foot-so-Port Shoe Construction and its Relation to Center Line of Body Weight



1. The highest percent of sizes in the shoe business are sold in Foot-so-Port shoes to the big men ond women who have found thot Foot-so-Port construction is the strongest, because .....

- The potented orch support construction is guoronteed not to break down.
- Speciol heels ore longer thon most onotomic heels ond maintain the appearance of normol shoes.
- Insole extension ond wedge ot inner corner of the heel where support is most needed.
- Innersoles ore guaronteed not to crock, curl, or collopse. Insuloted by o speciol loyer of Texon which also cushions firmly and uniformly.

2. Foot-so-Port lasts were designed and the shoe construction engineered with the ossistonce of many top orthopedic doctors. We invite the members of the medical profession to weor a pair — prove to yourself these stotements.

3. We moke more pairs of custom shoes for polio feet and all types of obnormal feet than ony other monufacturer.

FOOT-SO-PORT SHOES for Men, Women, Children

There is o **FOOT-SO-PORT** agency in all leoding towns ond cities. Refer to your Classified Directory

Foot-so-Port Shoe Company, Oconomowoc, Wis.

PICKER X-RAY CORP. of Iowa

DAVENPORT **DES MOINES**
SIOUX CITY **WATERLOO**
OMAHA

SALES—SERVICE—SUPPLIES
X-RAY AND ELECTROMEDICAL EQUIPMENT

Picker x-ray OF IOWA

An Iowa Corporation To Serve the Profession of Iowa

J. K. DUNN, ***Vice President***

50 *and eight years*

Treating Alcohol and Drug Addiction



RALPH CLINIC

Formerly The Ralph Sanitarium

A Department of the Benjamin Burroughs Ralph Foundation for Medical Research

Ralph Emerson Duncan, M.D., Medical Director.

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone Victor 3624

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
1202 Locust Street Telephone 2-6766

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

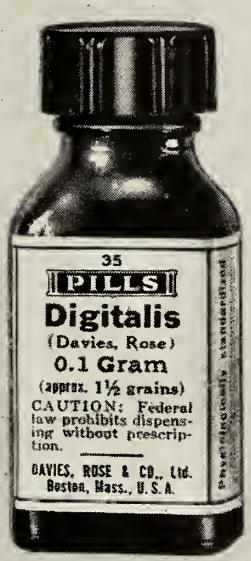
As of March 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland), Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.) .....Lt., U.S.N.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Bickford, R. H., Iowa City
(Lawton, Oklahoma) .....A.U.S.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.) .....Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) .....Capt., A.U.S.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Eckberg, R. A., Hubbard
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Hot Springs, Arkansas) .....1st Lt., A.U.S.
Field, C. A., Cresco
(Manhattan, Kans.) .....Capt., A.U.S.
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Garred, J. L., Whiting
(San Francisco, Calif.) .....Lt., U.S.N.R.
Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) .....Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.
Hanske, Edward A., Des Moines
(Camp Gordon, Georgia) .....Capt. U.S.A.H.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City .....A.U.S.

Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Jenkins, H. F., Ogden
(Randolph A.F.B., Texas) .....U.S.A.F.
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) .....1st Lt., A.U.S.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.) .....
Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.
Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Maxwell, J. R., Iowa City
(Tacoma, Washington) .....Capt., A.U.S.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Nielsen, G. E., Des Moines
(APO Seattle, Washington) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Perman, Harvey H., Forest City
(Yokasuka, Japan) .....U.S.N.
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfaff, R. A., Dubuque
(Camp Pendleton, Calif.) ..... Lt., U.S.N.R.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Prendergast, L. J., Iowa City
(Oceanside, California) ..... U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Reading, Donald, Iowa City
(U.S. Army Examining Station, Des Moines) .....
Rhode, M. C., Iowa City
(Philadelphia, Pa.)
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Bethesda, Maryland) .....Lt., U.S.N.R.
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Colorado Springs, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.,
4003 11th Street Place,
Telephone 3-3804

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

Spohnheimer, L. N., Donnellson
(Mountain Home AFB, Idaho) .....1st Lt., USAF
Stivers, T. W., Des Moines
(Hutchinson, Kansas) .....Lt. (jg) U.S.N.R.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(Letterman General Hosp., San Francisco)
.....Capt., A.U.S.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wall, J. M., Boone
(Bryan A.F.B., Texas) ..... 1st Lt., U.S.A.F.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st Lt., U.S.A.F.
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven
(New London, Connecticut) .....U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.
Zoeckler, Samuel J., Des Moines
(Ft. Sam Houston, Texas) .....Capt., A.U.S.

WHAT THE DOCTOR ISN'T PAID FOR

A combination of the results of two surveys made recently indicates that American physicians spend more than a third of their time doing work for which they expect to receive no pay, but at least as regards one kind of that work, there is need for their doing more.

The New Hampshire Medical Society reported last month that its average member provides $3,425 worth of free medical care a year—slightly more than $65 worth each week. For surgeons and specialists, the free care, measured in terms of dollars and cents, would be substantially greater. Surgery for which the doctor receives no payment or which he performs at a reduced rate may amount to $1,000 or more a month, the study showed. But from one M.D. or another, somebody in New Hampshire gets $4 worth of free medical care and treatment every minute.

About 22 per cent of the average physician's time is spent in medical reading, professional contacts with other physicians, attending hospital staff meetings, going to medical society meetings and taking formal postgraduate courses. Keeping up with new developments and discoveries in their fields ought really to take more of their time, Dr. Douglas D. Vollan, assistant secretary of the AMA Council on Medical Education and Hospitals declares. The physicians to whom he sent questionnaires reported that they had spent, on the average, no more than 43 of the 50 hours (one week) per year that the Council thinks should be a minimum in formal postgraduate education courses. But they said that they would like to increase that phase of their continuing education by 200 per cent.

#5

THE

Journal

OF THE IOWA STATE MEDICAL SOCIETY

CONTENTS

After Myocardial Infarction, What?
Raymond D. Pruitt, M.D., Rochester, Minnesota 219

Medical Treatment of Hypertension for the General Practitioner
C. R. Goddard, M.D., E. W. Paulus, M.D., and T. T. Bozek, M.D., Iowa City 224

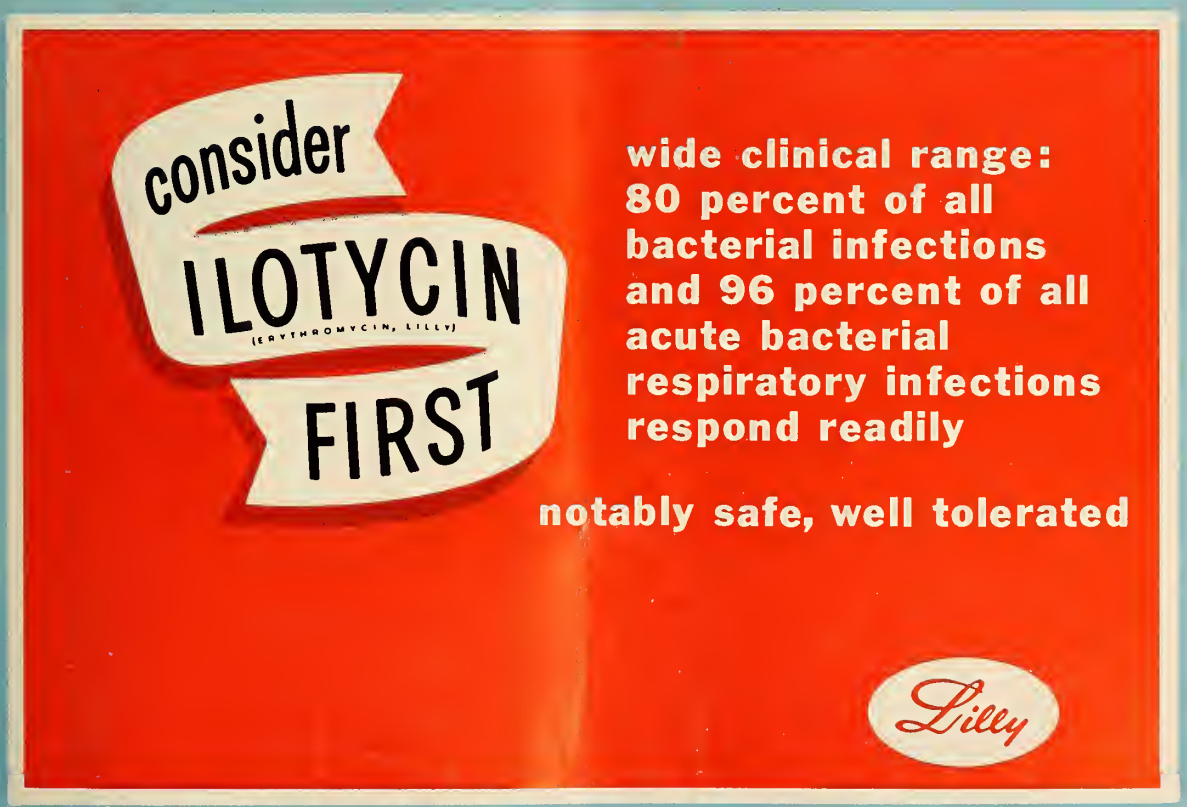
Diagnosis and Treatment of Diverticulosis and Diverticulitis
Lawrence O. Ely, M.D., Des Moines . 229

Chyle Peritonitis, Report of a Case
Joseph Trotzig, M.D., Akron, Iowa . 232

Emotional Problems of the Chronically Ill
Sidney L. Sands, M.D., Des Moines .. 234

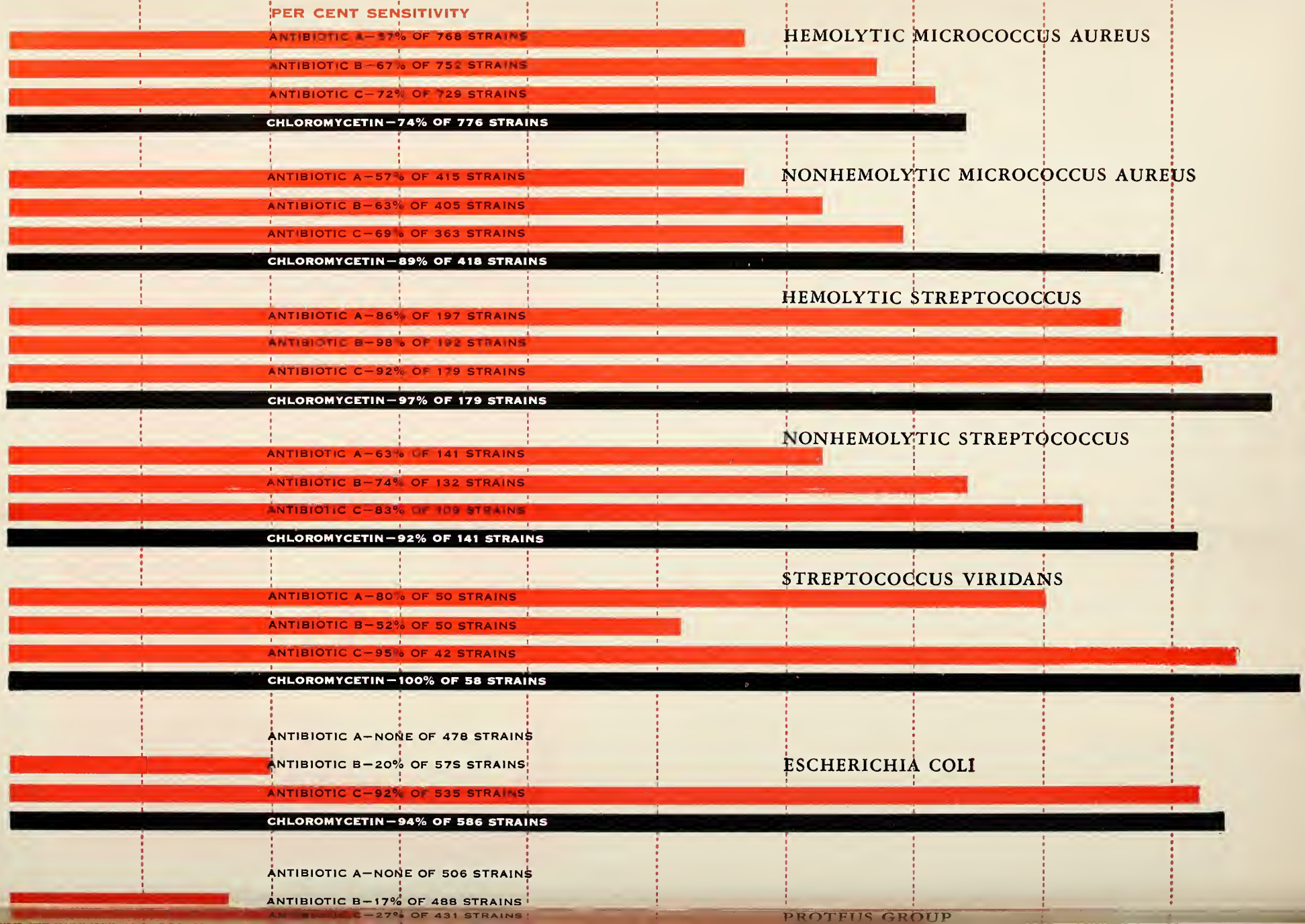
State University of Iowa College of Medicine Clinical Pathologic Conference 241

(Continued on page iv)

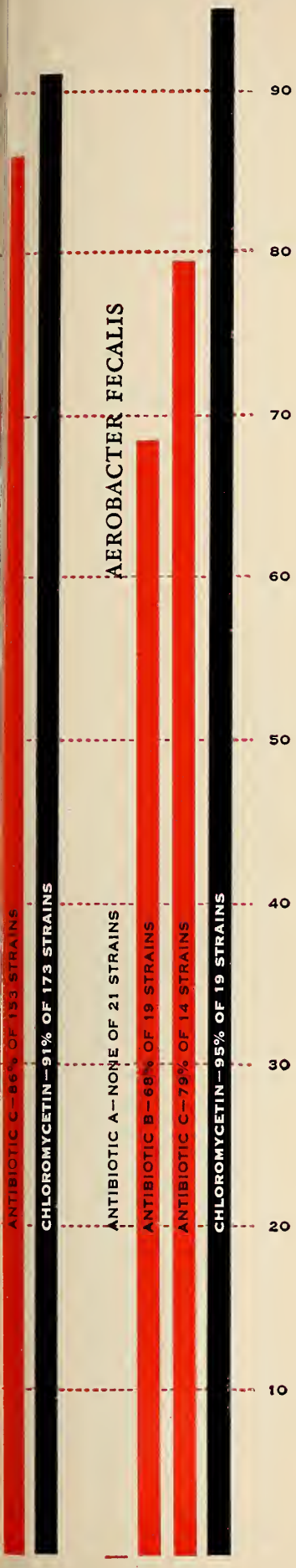


AMA Annual Meeting
Atlantic City, June 6-10

MAY, 1955


PER CENT SENSITIVITY
HEMOLYTIC MICROCOCCUS AUREUS
ANTIBIOTIC A—57% OF 768 STRAINS
ANTIBIOTIC B—67% OF 752 STRAINS
ANTIBIOTIC C—72% OF 729 STRAINS
CHLOROMYCETIN—74% OF 776 STRAINS
NONHEMOLYTIC MICROCOCCUS AUREUS
ANTIBIOTIC A—57% OF 415 STRAINS
ANTIBIOTIC B—63% OF 405 STRAINS
ANTIBIOTIC C—69% OF 363 STRAINS
CHLOROMYCETIN—89% OF 418 STRAINS
HEMOLYTIC STREPTOCOCCUS
ANTIBIOTIC A—86% OF 197 STRAINS
ANTIBIOTIC B—98% OF 192 STRAINS
ANTIBIOTIC C—92% OF 179 STRAINS
CHLOROMYCETIN—97% OF 179 STRAINS
NONHEMOLYTIC STREPTOCOCCUS
ANTIBIOTIC A—63% OF 141 STRAINS
ANTIBIOTIC B—74% OF 132 STRAINS
ANTIBIOTIC C—83% OF 109 STRAINS
CHLOROMYCETIN—92% OF 141 STRAINS
STREPTOCOCCUS VIRIDANS
ANTIBIOTIC A—80% OF 50 STRAINS
ANTIBIOTIC B—52% OF 50 STRAINS
ANTIBIOTIC C—95% OF 42 STRAINS
CHLOROMYCETIN—100% OF 58 STRAINS
ESCHERICHIA COLI
ANTIBIOTIC A—NONE OF 478 STRAINS
ANTIBIOTIC B—20% OF 575 STRAINS
ANTIBIOTIC C—92% OF 535 STRAINS
CHLOROMYCETIN—94% OF 586 STRAINS
PROTEUS GROUP
ANTIBIOTIC A—NONE OF 506 STRAINS
ANTIBIOTIC B—17% OF 488 STRAINS
ANTIBIOTIC C—27% OF 431 STRAINS

sensitivity of common pathogens to CHLOROMYCETIN and three other major antibiotic agents



more effective against more strains...

Chloromycetin®

for today's problem pathogens

Because of the increasing emergence of pathogenic strains resistant to commonly used antibiotics, judicious selection of the most effective agent is essential to successful therapy. In vitro sensitivity studies serve as a valuable guide to the antibiotic most likely to be most effective. Both clinical experience and sensitivity studies indicate the greater antibacterial efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) in the treatment of many common infections.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

Adapted from Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* 157:305 (Jan. 22) 1955.

MEDICAMENTA VERA

Parke, Davis & Company

DETROIT, MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV MAY, 1955 No. 5

CONTENTS

(Continued from page i)

EDITORIALS

Do We Face a Shortage of Physicians? . . 248
Work Simplification for Cardiac Housewives . 248
The End of the Rainbow 249
Normal Red Blood Cell Count 252
IAGP Is Growing 252
Questionnaire on Industrial Health . . . 253

SPECIAL DEPARTMENTS

President's Page 254
Iowa Academy of General Practice . . . 255
Blue Cross-Blue Shield 256
The Doctor's Business 257
Journal Book Shelf 258
Mental Illness 260
State Department of Health 261
Coming Meetings 262
Woman's Auxiliary News 263
Speakers' Bureau Schedules 264
County Societies
Meetings 266
Deaths 266
The Month in Washington xviii
Personals xx
Roster of Iowa Physicians in Military Service xxxi

MISCELLANEOUS

Health Careers Guidebook 228
ISMS Television Program Wins National Award 231
Public Relations Meeting 247
Civilian Care for Army Personnel . . . 253
Anesthesiology Exhibit 259
Program for Combatting Juvenile Delinquency 265
Parke, Davis Will Issue New Leaflet . . . 265
Cardiology 265
Law Facilitates Disciplining of Doctors . . 265
Doctors Are Receiving Soviet Mailings . . 265
Income Tax Booklet 266
"Series H" Treasury Bonds xix
Surgery Short Course xxxi
Rocky Mountain Cancer Conference . . . xxxi

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
MISS MARY L. McCORD, Business Manager..Des Moines
MR. EDWARD W. HAMILTON, Assistant Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

WENDELL L. DOWNING, M.D., Trustee.....Le Mars
GEORGE H. SCANLON, M.D., Trustee.....Iowa City
FRED STERNAGEL, M.D., Trustee.....West Des Moines
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio*, Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

Scientific Articles

After Myocardial Infarction, What?

RAYMOND D. PRUITT, M.D.

ROCHESTER, MINNESOTA

THE TITLE "After Myocardial Infarction, What?" is not, I suppose, a particularly graceful one, but it has certain solid virtues. It commands attention, it invites discussion and it commits no one to anything. So broad a title is also inevitably a rather ambitious one, for in its proper treatment, perspective and wisdom ought to take precedence over erudition and fact. Certain advantages would be achieved if the readers, rather than review the necessarily limited observations of one individual author, could share their experiences and deductions as they concern the postinfarction period.

Postinfarction problems can be divided, as is the custom in historical matters, into the immediate and the remote. The immediate ones occur in those early weeks when observation, deduction and medication are important. In them, the physician plays an active role, if not always a particularly effective one. The remote problems, occurring during a time of adjustment in habits of living that may lengthen either into years of relaxed and pleasant fulfillment or into days of harried, frustrated disillusionment, are ones with which the patient must be left to deal. It is the patient himself who determines his course at this point, and his reactions are shaped by social and economic forces, as well as by his own capacities, or his lack of them, to accept the burdens and restrictions of his illness. About this latter period, only the individual who has lived through the experience is justified in speaking with authority. The rest of us may report our observations, remembering always that it behooves us to deal sympathetically with those whose responses to illness are not especially mature. We might do no better; we might not do even so well.

Dr. Pruitt is a member of the staff in the Section of Medicine at the Mayo Clinic and Mayo Foundation. The Mayo Foundation is a part of the Graduate School of the University of Minnesota. The paper was read at a meeting in Des Moines sponsored by the Iowa Heart Association, the Iowa Trudeau Society and the Iowa Tuberculosis and Health Association on April 14-15, 1954.

We can begin by reviewing certain findings which bear on the fate of patients with myocardial infarction during the periods related immediately and remotely to the onsets of their lesions.

Achor[1] carried out a study to determine the cause of death of 250 patients who were studied at necropsy and were found to have an area or areas of healed myocardial infarction. Interestingly enough, in only 157, or 62.8 per cent, of them was death due primarily to cardiac causes. The remaining 93 (37.2 per cent) died as a result of factors ranging from complications of surgical procedures to infectious diseases. Among the 157 patients (62.8 per cent) whose deaths could be ascribed primarily to cardiac disease, 44 (17.6 per cent of the 250 patients) died in congestive failure unattended by evidence of a new myocardial infarction, and 49 (19.6 per cent) died during a new episode of acute myocardial infarction. The largest single group (64, or 25.6 per cent) died suddenly without any signs or symptoms of congestive heart failure or acute myocardial infarction.

Among these figures, those which apply to sudden death merit some words in comment and reflection. Many of the patients who came ultimately into this category were in reasonably good health and were able to lead a life of moderate activity until the day of death. They died, in all probability, because of a cardiac arrhythmia, the exact nature of which we do not know. We can speculate that ventricular fibrillation developed in many of them, and a Stokes-Adams type of seizure, with abrupt arrest of ventricular activity, may have been experienced by others. Of all patients dying from heart disease, whatever its type, this group is the most distressingly frustrating to the physician and provocative of concern to every patient with coronary heart disease. We have reason to believe that many of these patients had a residuum of functioning myocardial fibers and coronary blood flow

sufficient to carry them many years. Their deaths may well have been the consequence of a rhythmic disturbance provoked by a localized area of ischemic myocardium or of a heart block consequent to a focal lesion at a critical point in the conduction system—a small lesion, in either event, and of little importance apart from its effect on the cardiac rhythm. But whatever the details of the mechanism of death, here is a group of cases which remains beyond the reach of our most determined therapeutic efforts and a challenge to the minds of all who choose to reflect on the unresolved problems in cardiac therapy. As physicians responsible for the care of patients with cardiac disease, we should avoid provocation of such needless concern in the minds of our patients as would result from undue emphasis or magnification of these facts. Yet, as individuals devoted to improving the care of these same patients, we should never ignore the urgent need for resolution of the problems which these data identify.

We can reasonably proceed from this category of problems, about which we do least, to one which has been the subject in recent years of our determined efforts to do most, in a preventive sense. I refer to the thromboembolic complications which occur among patients who have experienced myocardial infarction. About the subject of anticoagulant therapy during the period immediately following a myocardial infarction, I would not pretend to say anything new. We have made elaborate efforts to secure facts on which to judge the desirability of anticoagulant therapy during the immediate postinfarction period. An affirmation of its desirability has come back with almost monotonous consistency. Some question has been raised regarding the need for such treatment in all patients who have had myocardial infarction.[2] For the skilled observer, a satisfactory distinction between "good risk" and "poor risk" patients may be feasible. But when such clinical acumen is combined with excellent facilities, the risk of anticoagulant therapy also is very low.

Of late, discussion within the field of anticoagulant therapy has been more lively as it pertained to long-term treatment for the patient who has had a myocardial infarction. From all appearances, this debate should retain vitality for a long time to come, inasmuch as the problem has that delectable quality not only of being unencumbered by facts but also of being unlikely to suffer any accretions of significant data in the immediate future. Since patients untreated with anticoagulants commonly survive a myocardial infarction for many years, the job of comparing a series of treated cases with a similar group of untreated ones might not be just a lengthy study, but a career. I am reminded of the story of a professor who was outlining a particularly ambitious research problem to a group of his most promising graduate students. "Now your first assignment," he is reputed to have told them, "is to go out and find yourselves some very highly intelligent young ladies, to marry them and to start rearing families of bright children. For, you see, solving this problem may command the talents of several generations."

If a certain hazard were not inevitably incident to anticoagulant therapy even when managed expertly, I suppose we might do whatever we thought might be beneficial until it was proved of no avail. But as long as a certain risk remains, I think we can reasonably defer that day when, as a routine procedure, "every man over 40 years of age takes his anticoagulant pill with his morning coffee." But avoiding the extreme does not preclude the use of long-term therapy for the occasional patient who already has experienced a thromboembolic complication and can be looked upon as under increased risk of having another.

If any reserves of energy remain at the end of a debate over anticoagulant therapy in the aftermath of myocardial infarction, they may be used in an attempt to resolve the issues which have grown up about the subject of dietary management in the patient known to have coronary disease. But as sensible practitioners of medicine, we should stand aloof, for the present, from the details of those studies which seek, on the one hand, to reduce atherosclerosis to a physiochemical phenomenon understandable in terms of flotation fractions, or, on the other hand, to solve this problem by contrasting the dietary habits of the sedentary American executive with those of the struggling Spanish laborer. Those two projects are meritorious, but their influence on therapy must remain in the nature of a general force, rather than a specific directive. For this year at least, we may well adhere to certain simple generalizations regarding diet: (1) If the patient who has experienced a myocardial infarction is obese, he should reduce his weight. (2) If he is young, and particularly if the level of fat in his blood stream is elevated, he should curtail his intake of fat. Just how stringent this restriction should be will depend upon how physically active he is and upon his readiness to accept a dietary limitation of unestablished effectiveness in retarding the progress of his disease. (3) If, and only if, symptoms or signs are observed which indicate the presence of impaired myocardial reserve, with impending or overt congestive heart failure, he should restrict his intake of sodium. This point is mentioned only because patients continue to report, accurately or otherwise, that they were advised to go on a low-salt diet because they had experienced a myocardial infarction. Loading these harassed patients with a single unjustifiable restriction is not a commendable deed.

A developing area in the field of dietary management of patients with coronary disease is that which concerns the lipotrophic substances. Just

now, the accumulating evidence has taken a rather favorable turn, with Best and his associates[3] reporting a significant reduction in the levels of cholesterol in the serum consequent to the administration of sitosterol. If reduction in the serum cholesterol is a factor favorably influencing the course of coronary atherosclerosis, perhaps a significant advance in therapy is at hand. However, reservation of judgment is certainly appropriate in view of the preliminary stage of the investigations and the questionable bearing that disorders in cholesterol metabolism have upon the pathogenesis of the usual case of coronary sclerosis.

With this comment regarding restrictions in diet, we may proceed without break in pace to certain other areas in which restriction is either the rule or the subject of controversy in the care of patients who have experienced myocardial infarctions. Let us dispatch first with the problem of smoking. I have always regarded emphasis on this problem as unjustified. I am not at all certain that the majority of patients with coronary disease who smoke shorten their lives by doing so. A few of them may. On the other hand, it is reasonably clear that nicotine is not an established agent in the treatment of coronary disease, and we may confidently assure our patients that they can proceed in reasonable security without oft-repeated inhalations of it. After the patient has been introduced to these simple but basic facts, the matter is no longer the physician's problem, but the patient's. He may choose his own course. It is, however, worthy of emphasis that whatever may be the pharmacologic consequences of smoking two packs of cigarettes a day, this act in itself is blatant testimony to the tension under which the individual is living. Existence on such a level is hopelessly at odds with that serenity and stability which more than anything else should characterize the life of the patient who has had a myocardial infarction.

This brings us to that far more important area of restrictions: limitations on activities. If we are possessed of any humanity at all, we cannot deal with this subject in the cynical spirit that was directed deliberately at the question of smoking. For many of our patients, the reason for existing at all may hinge upon how intelligently and understandingly we deal with those of their problems arising from the imposition of restriction on activity.

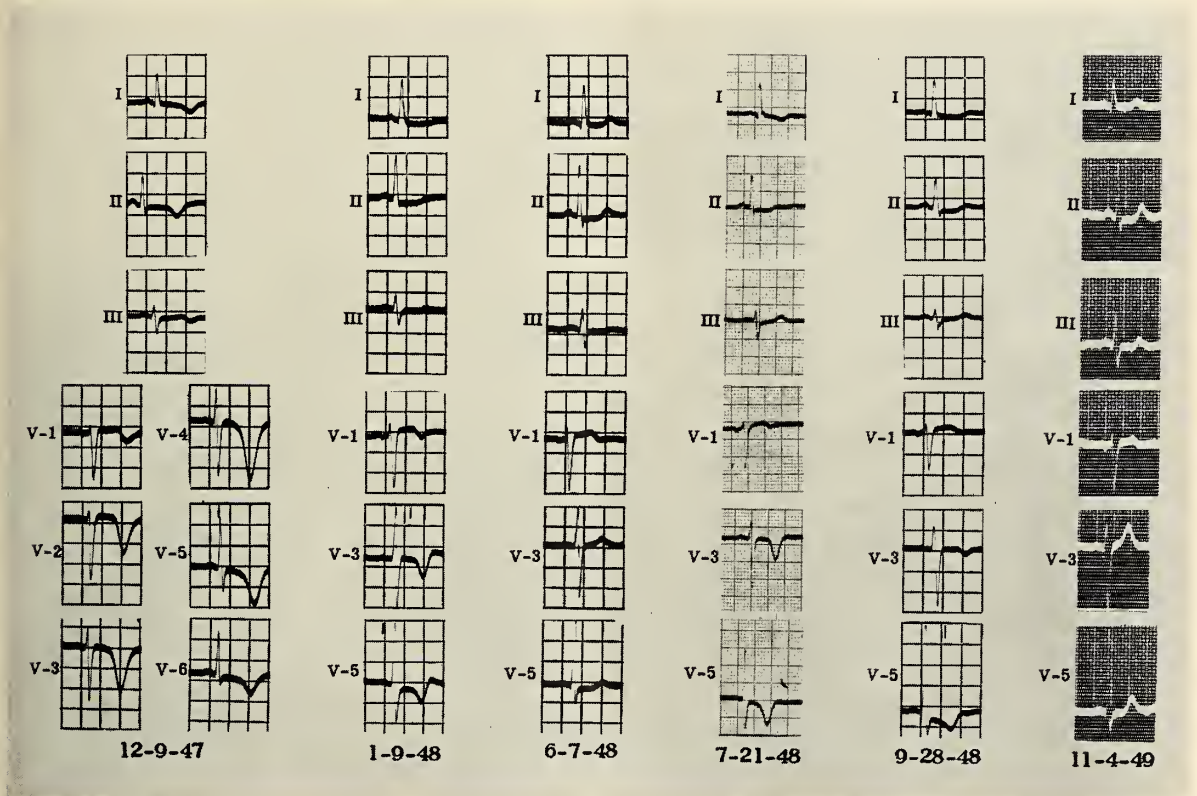


Figure 1. Electrocardiograms recorded on a man 57 years of age who was subject to recurring episodes of severe distress of an anginal type from December 9, 1947, to July 21, 1948. The tracings made on June 7, 1948, during a remission in his symptoms reveal a return of the ventricular complexes to a configuration approaching normal. Inversion of T waves particularly marked in precordial leads V_3 and V_5 recurred during an exacerbation of symptoms prior to the electrocardiogram of July 21, 1948. Thereafter, the records reverted again toward more normal configuration, and tracing of November 4, 1949, is within normal limits.

These records are of interest in that they illustrate an expression of severe coronary insufficiency probably attended by necrosis of myocardial fibers which never reaches a degree productive of QRS changes in the acute phase, nor of persisting abnormalities in the ventricular complexes in the period following remission of symptoms.

With respect to activities in the immediate postinfarction period, I suppose some comment justifiably can be made about bed rest. It has been suggested that physicians in recent years have pursued a rigid and unrelenting course with their patients during the days just after an infarction, compelling every one of them to remain at strict rest in bed for three to six weeks. Such excesses may have been indulged in by some practitioners, but I doubt that they represent any considerable portion of the whole. Common sense has been too prevailing an attribute of the majority of physicians to permit them any such total disregard for the needs and comforts of the individual patient. Some patients are extremely ill during the first week or two after a myocardial infarction, and are sufficiently weakened by their illness that they have little inclination to be out of bed for a time longer than that required for them to use a bedside commode. If anticoagulant therapy is available and adequately administered, there is no reason to believe that these patients are harmed by their weeks in bed, and it is my impression that they might have suffered considerably from any efforts to get them up sooner. At the other extreme is the elderly patient who has a comparatively mild infarction, but whose cardiac reserve is considerably impaired. From the onset of his illness, both the comfort and the security of this patient will be fostered by permitting him to be in a chair, rather than in bed, as much as he may choose. The proportion of patients in one or the other of these two categories will vary in keeping with the type of patients who come under the care of a specific physician. The interests of the majority of those who come under our supervision would appear to be served best by reasonably complete rest in bed for approximately three weeks.

Can the electrocardiogram be used to any good effect in determining the character of the postinfarction period? As a generalization, one can say emphatically that the electrocardiogram is a diagnostic aid and has little value in matters of therapy and prognosis. As a point of some interest, it may be noted that certain types of change in the electrocardiogram commonly appear in association with certain clinical states in the immediate postinfarction period. The records which constitute Figure 1 are characterized by the limitation of changes to the RS-T segment and T waves of the ventricular complexes and by eventual complete resolution of those abnormalities. The tracings in Figure 2 reveal marked and persistent alterations in the QRS complexes as well as changes in the RS-T segment and the T wave. Agreement exists that this latter type of record is encountered in patients who have experienced a transmural infarction of the free wall of the left ventricle. These patients often present the clinical picture of an acute illness, attended in some instances by shock and commonly by fever and leukocytosis. On the other hand, it is our experience that patients presenting the former type of electrocardiogram are likely to have a subendocardial patchy type of infarction. Clinically, they commonly have recurrent episodes of pain scattered over days or weeks. Rarely do they have fever or leukocytosis, and almost never does shock develop.

It is reasonable enough that the management of patients with electrocardiograms of the first type should be somewhat less restricted and prolonged than that of patients in the second category. However, the electrocardiogram in this respect is merely evidence for a decision which rests principally on other and more readily apparent data.

The remote postinfarction period demands the

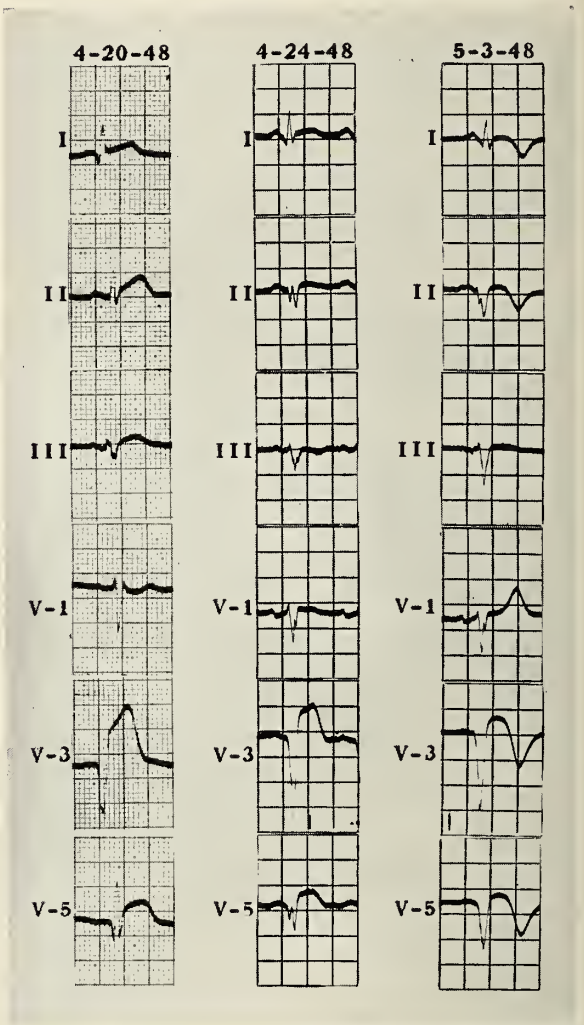


Figure 2. Electrocardiograms recorded on a man 52 years of age who experienced an episode of severe substernal pain on April 20, 1948, extending into both shoulders and down both arms into the hands. The pain lasted three hours and was attended by a state of shock. On April 26 a pericardial friction rub was heard. On May 5, the patient died.

In the electrocardiogram of April 20, significant changes included elevation of the RS-T segment in leads I, II, V_3 and V_5 and absence of the R deflection in V_3. By April 24, the R deflection in V_5 had become much smaller. In the record of May 3, deeply inverted T deflections were present in leads I, II, V_3 and V_5. The R deflections in V_3 and V_5 were absent. Further comment is included in the text.

same individualization of care, with respect to activities, as does the immediate period. For certain of our patients, particularly the elderly and semi-retired ones, myocardial infarction may provide an excellent excuse to forego the residuum of annoying responsibilities which encompassed them and to retain only those aspects of living which they found most enjoyable. To that group who still carry a heavy burden of economic and social responsibilities, the problem presented by their illness is of an entirely different order. Let us attempt to set down a few principles which may sustain our judgment in dealing with this group.

Stress, as it affects the myocardium, may be related to physical or to emotional factors. Because the considerations which apply to one of these factors may not be pertinent to the other, their discussion will be handled sequentially.

There is no sound reason for believing that such physical activity as a patient can carry on comfortably is harmful to his myocardium or has much likelihood of inducing sudden death. The individual who has angina pectoris during the postinfarction period ordinarily learns quite promptly the limits of his tolerance and the factors which enlarge or contract the limits within which he can operate without inducing pain. The patient who is not subject to anginal pain may be guided in some measure by the prohibition of activities which invoke shortness of breath. A categoric injunction against strenuous physical exertion seems reasonable and justifiable.

These general restrictions will permit the majority of patients who have experienced a myocardial infarction to carry on a wide variety of physical activities as long as they set a pace appropriate to their tolerances. They can walk, if they stroll; they can play golf, if they avoid the energetic foursomes; they can hunt and fish, if they select their type of game wisely.

However, certain physical activities permit scant compromise of pace, and the patient in the postinfarction period will do well to avoid them. The lawnmower and the shovel, with which man has sought to control the grass in summer and the snow in winter, were never designed to be used by the philosopher, the poet or the patient with coronary sclerosis.

With respect to myocardial stress consequent to emotional factors, those principles defined for the governing of physical activity remain appropriate. However, the quantitation of stress is more difficult for emotional than for physical engagements, and the termination of the stressful situation often is difficult or temporarily impossible. The administrator who must negotiate an exasperating dispute between labor and management, the lawyer who must plead his client's case before judge and jury, the minister who begins his sermon calmly enough but surges inevitably toward a climax laden with emotion—who can place a governor on these?

The only evident answer involves a change in the nature of responsibilities borne by these people—a change which may entail its onus of frustration as it takes away that part of a man's professional duties that have been dearest to him. The evidence of experience supports the physician who assumes a strong stand on this issue. There is reason to believe that years may be added to the life of the patient who is willing and able to divest himself of duties which had drained his emotional reserves and made him easy prey to stress and tension.

After myocardial infarction, what? In good rhetorical style let us close this discussion by reverting to the question with which we initiated it, and let us give one more answer: After myocardial infarction—fear, perhaps latent, perhaps concealed, perhaps manifest, but fear, in any event. It is an almost universal sequela of infarction. Its shadow falls not only on the patient himself but on all who love him and need him. As physicians, we have an obligation to recognize this element in our patient's illness and to deal with it as humanely and effectively as we can. A modicum of fear is appropriate to the circumstances in which the patient finds himself, and it can be productive of good ends. It may afford the emotional drive that he needs if he is to fulfill his good resolutions about avoiding excesses in work, in play or in diet. But all too often fear reaches excessive proportions. Curtailment of fear is just as difficult as is the exact limitation of any other of the emotions. The physician many times can render a real service by reviewing certain simple facts about myocardial infarction—facts that are commonplace to him, but perhaps are totally unknown to the patient. He can point out that coronary disease is not steadily and remorselessly progressive, but rather is often, from the symptomatic standpoint, a phasic illness in which the patient has long periods of complete freedom from pain or discomfort. He can emphasize the favorable prognostic situation of the patient, particularly when the acute phase of the infarction is past, a prognosis which offers an average period of several years with frequent instances of much more prolonged survival. He can refer to the cases of men like Thomas Lewis and Frank N. Wilson, eminent cardiologists, who went on to many years of creative, productive living after experiencing myocardial infarctions. He can help the patient separate symptoms significant of heart disease from the neuromuscular pains and the incidental disturbances in cardiac rhythm which, because of their prevalence or their occurrence at unpredictable times, may have been far more productive of anxiety than have more significant symptoms.

To do these things for the patient requires primarily that the physician be liberal in bestowing his sympathy, his understanding and his time. So often it is time which we lack and time which we fail to expend in doing anything other than attempting to care for the organic demands of a

patient's heart. Once in a while, we need to face squarely the humbling realization that when our patient's illness is coronary sclerosis attended by myocardial infarction, we accomplish very little through all our efforts to change the physical elements in his situation. Reflection on that fact may lead us to conclude that by means of sympathetic and understanding attention to his fears and cares, we may achieve more than we can by undue concentration on the level of cholesterol in his plasma or on the latest contour of the RS-T segment in his electrocardiogram.

BIBLIOGRAPHY

1. Achor, R. W. P.: The Fate of Patients Who Have Survived Acute Myocardial Infarction. Thesis, Graduate School, University of Minnesota, 1953.
2. Russek, H. I., Zohman, B. L., Doerner, A. A., Russek, A. S., and White, L. G.: Indications for bishydroxycoumarin (Dicumarol) in acute myocardial infarction. Circulation, 5:707-711, (May) 1952.
3. Best, M. M., Van Loon, E. J., Duncan, C. H., and Wathen, J. D.: Lowering of serum cholesterol by the administration of plant sterols. (Abstr.) Program, Scientific Meetings, Section on Clinical Cardiology, American Heart Association, April 3-4, 1954, pp. 10-11.

Medical Treatment of

Hypertension for the General Practitioner

C. R. GODDARD, M.D., E. W. PAULUS, M.D.,
AND T. T. BOZEK, M.D.

IOWA CITY

SINCE THE DISCOVERY of the sphygmomanometer almost a full century ago and the subsequent recognition of the normal levels of systolic blood pressure, an increasing amount of interest and research has been pointed toward the relief of hypertension. For many years, physicians have attempted with varying degrees of success to control it by medical treatment. Among the drugs used have been those of the theophyllin group, thiocyanates, nitrites, barbiturates and veratrum viride. For one reason or another, each of them has been largely discarded. Some were found to be unsafe, and others had little or no effect upon hypertensive levels of blood pressure.

Within the past two decades, with the recognition of the physiopathologic effects of an elevated blood pressure upon the various vital organs of the body, greater emphasis has been placed upon the early recognition and treatment of elevated blood pressure. A great amount of work has been done on the surgical approach to the control of essential hypertension, and unilateral and bilateral sympathectomy is now a standardized procedure. More recently, adrenalectomy has been successfully performed with promising results. On the whole, however, results of those surgical procedures have been disappointing, and because of their inherent dangers and disturbing side effects, attention has been redirected to the medical approach to the problem.

The optimum drug for the relief of hypertension must satisfy several requirements. It must be safe in the hands of all physicians who are treating hypertension, and it must also be safe for the patient to take by himself, under the direction of his physician. It must have few, if any, side effects. It must not, itself, be expensive, and it must not require excessively close supervision by the physician, for his attention adds to the expense of the treatment. The drug should also have a rather prolonged effect, so that the normal life of the patient may not be disturbed by frequent or unusual hours of medication.

NEW DRUGS

1. *Rauwolfia Serpentina* was introduced into this country after having been used for many years in India in the treatment of some psychiatric illnesses. At first the powdered whole root* was used, but more recently the active alkaloid reserpine has been marketed under various trade names.** Rauwolfia alkaloids are advantageous in that they are simple to administer and do not induce severe side reactions. In the majority of cases, significant reduction in blood pressure is observed, and when used in combination with other hypotensive agents, they have an additive effect, and the dosage of the individual drugs needs not be excessive. The side effects of Rauwolfia consist of drowsiness, nasal stuffiness and bradycardia. It has been our experience that the drowsiness and nasal stuffiness are much less pronounced with the alkaloids than with the powdered whole root.

In contradistinction to the ganglionic blocking agents, Rauwolfia alkaloids seem to increase intestinal motility, and their action seems almost entirely to be exerted upon the central nervous system, producing a sedative, tranquilizing effect.

2. *The Veratrum alkaloids.* Although veratrum viride has long had a place in the treatment of hypertension, its therapeutic index has been relatively low, and its side effects have been quite dis-

* Raudixin (Squibb).
** Serpasil (Ciba), Sandril (Lilly).

turbing. More recently, alkaloids of Veratrum alba have been used and have seemed to give a wider range of therapeutic usefulness, fewer side effects and a higher index of therapeutic safety. The Veratrum alkaloids act primarily on the vagal nerve endings and on the carotid sinus to produce a bradycardia and vasodilation. High dosages of Veratrum will produce nausea and vomiting, but we have found that smaller doses of Veratrum alkaloids can be used if one combines them with the alkaloids of Rauwolfia. Several pharmaceutical houses have marketed the Veratrum alkaloids, but in this investigation we used Protoveratrin A and B (Provell-Lilly). There has been a recent trend toward the marketing of these alkaloids in combination with other drugs in the same tablet or capsule. We do not feel that such combinations are advisable, but rather that each drug should be individualized as to its dosage schedule, so as to produce its maximum effect and yet not exceed its limit of toxicity.

3. *1-Hydrazinophthalazine (Apresoline—Ciba).* This drug produces a marked decrease in peripheral vascular resistance, particularly in the splanchnic and kidney areas. Cardiac output is usually doubled, largely as the result of an increased stroke volume and tachycardia. Although this drug seems to have a high therapeutic index, some disturbing side effects frequently have tended to limit its usefulness for the general practitioner. The chief ones of these are headache, palpitation, breathlessness and angina. Reports in the literature indicate that Apresoline has occasionally produced collagen diseases, particularly those simulating lupus erythematosus, gastrointestinal hemorrhages and pancytopenia. In our series, Apresoline was used in only a few patients in the early part of our investigations. We abandoned it because of its annoying side effects.

4. *Hexamethonium* is a potent ganglionic blocking agent capable of lowering blood pressure for short periods. Tolerance to hexamethonium is rapidly induced, so that long-term therapy with it cannot be undertaken. The chief side effects are postural hypotension, decreased gastrointestinal motility and impotency. It has been our feeling that hexamethonium should be used only under strictly controlled conditions in hospitals and that it is too dangerous for general practitioners to use in treating ambulatory patients. Therefore, we have treated no cases with hexamethonium.

5. *Pentolinium Tartrate (Ansolysen—Wyeth)* is a new ganglionic blocking agent similar to hexamethonium in its mode of action. The site of action is, apparently, the sympathetic and parasympathetic ganglia. It has no direct action on heart muscle and does not modify coronary blood flow. It has been proved that there is no direct vasodilatory action on the peripheral vessels. Its advantages over hexamethonium are that (1) it has a more prolonged action (approximately eight hours for Ansolysen, as against four hours for hexamethonium), (2) it is better tolerated, and (3) it is about five times as potent as equal amounts of hexamethonium. It apparently causes less interference with intestinal motility, and there is a much more nearly uniform response in day-to-day oral administration. And furthermore, in the intestinal tract the absorption of Ansolysen seems to be much more nearly uniform than that of hexamethonium. The most frequent side effects in the use of Ansolysen have been postural hypotension and constipation. When constipation occurs because of the blocking action of the drug, absorption of Ansolysen from the intestinal tract is interfered with, and successive doses will permit larger amounts to be absorbed into the circulatory system at one time. When this occurs, postural hypotension may become an annoying factor. Other side effects of the use of this drug are dryness of the mouth, dilation of the pupil and difficulty in micturition.

METHOD

There has been some disagreement as to the levels at which hypertension should be thought present. For many years, the acceptance of a systolic pressure equivalent to 140 mm. Hg. and a diastolic pressure equivalent to 90 mm. Hg. as the upper limits of normal has been practically universal. Recently, however, Masters has shown, in a large series of blood pressure determinations on apparently healthy individuals, that those limits have been too rigid and that the normal blood pressure increases gradually with the normal aging process. However, when we stop to consider that an elevation of blood pressure is a reflection of an increased load upon the cardiac musculature and vascular tree, it becomes evident that attempts should be made to control hypertension in its incipiency.

For purposes of this investigation, we therefore adopted an attitude that a blood pressure reading above 150 mm. systolic and/or 90 mm. diastolic indicated hypertension in people under the age of 50. Between the ages of 50 and 65, our limitations were 160 mm. systolic and/or 100 mm. diastolic, and over the age of 65, our limits were 170 mm. systolic and/or 100 mm. diastolic. In this report we have included only those cases whom we followed for more than four months. Blood pressure determinations were always obtained when the patient was in the sitting position, but no attention was paid to the time of day at which the patient was seen. We feel that the erect blood pressure more nearly represents the stress that the patient's vascular tree endures during the largest part of his working day and thus gives us better information as to his nearness to postural hypotension.

When two successive blood pressure readings in excess of those stated limits indicated the presence of hypertension, the patient was given a complete

physical examination, blood count, urinalysis and electrocardiogram. All cases of aortic insufficiency and the physiologic hypertension of arteriosclerosis were eliminated from the series. We did not encounter any cases of pheochromocytoma or coarctation of the aorta. Within these limitations, then, our cases were considered to be in that large homogeneous group called "essential hypertensives."

Drug therapy for these hypertensive patients was started with Reserpine* given 0.25 mg. in the morning after breakfast and at bedtime. This drug was continued for two weeks, blood pressure determinations being made at intervals of four to seven days. If after the two-week period, the blood pressure had not dropped to normotensive levels, one of the Veratrum alkaloids was added to the regime of treatment. Protoveratrin A and B,* 0.5 mg., was given three times a day after meals. This drug was increased in increments of 0.25 mg., with higher dosages after breakfast and smaller dosages after dinner and supper. The dosage was increased until the maximum lowering of blood pressure had been obtained, or until nausea occurred.

If after approximately four weeks of this combined therapy the blood pressure had not approached normotensive levels, the addition of Ansolysen** was considered. The patient was brought to our office at 8:00 a.m., following breakfast and after whatever dosage of medication he had previously been taking. Blood pressure determination was made, with the patient in the sitting position, and he was given 20 mg. of Ansolysen by mouth. He was allowed to remain in a sitting or erect position for the next eight hours, and blood pressure determinations were made every 30 minutes. In this way, the sensitivity of the patient to Ansolysen could be determined. The maximum drop obtained with this drug usually occurred within two hours, and a gradual return to the previous level followed in about eight hours. The patient was then started on Ansolysen, 20 mg. every eight hours, and blood pressure determinations were made every third day. The drug was then increased in increments of 20 mg. every eight hours, at three day intervals, until the maximum relief of hypertension had been obtained. At no time was the total dosage of 600 mg. per day exceeded. It was noted that the dosage had to be increased from time to time because of the development of tolerance.

We have had only a few opportunities to use Ansolysen parenterally. We feel that this method of administration should be reserved entirely for those patients who are hospitalized and can be kept under very strict control. It will ordinarily be used only on those patients who are in the malignant phase of hypertension or whose hypertensive disease has caused severe cardiac or renal failure.

Figure 1 is a blood pressure graph showing a typical patient who entered the hospital in cardiac failure as a result of his hypertension. He had been taking Reserpine for approximately four weeks prior to admission. The changes in his eye grounds and kidney function tests showed him to be in an early phase of malignant hypertension. He was given 10 mg. of Ansolysen subcutaneously, and with the patient in a sitting position, the blood pressure determinations were made at 15 minute intervals for a period of eight hours. Following this original test dose of Ansolysen, he was put on a single dose of 6 mg. of Ansolysen per day, given at 6 a.m. Figure 2 shows the patient's average daily blood pressure readings during his hospitalization. All evidence of cardiac decompensation disap-

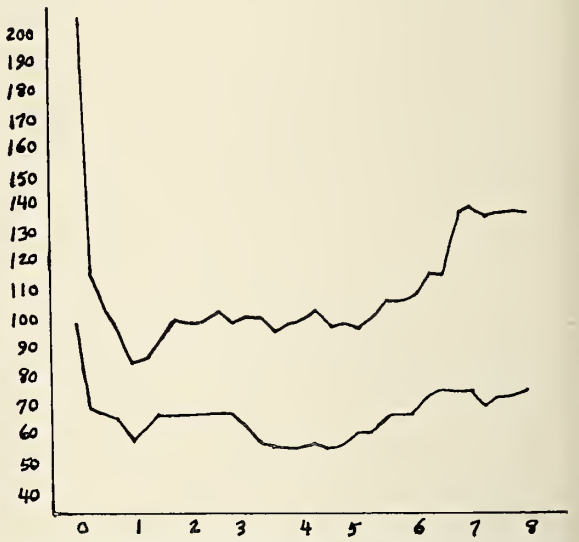


Figure 1. Blood pressure after administration of 10 mg. Ansolysen subcutaneously.

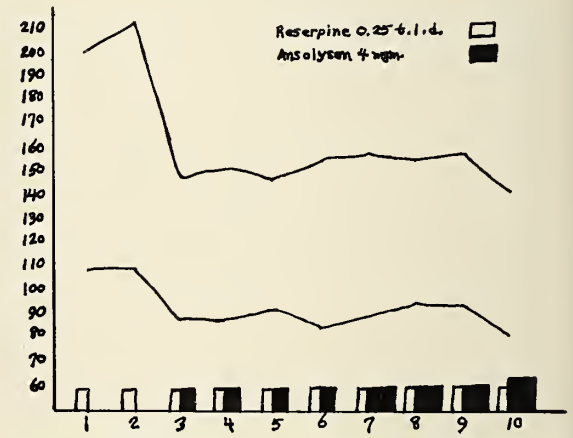


Figure 2. Average daily blood pressure on Reserpine and parenteral Ansolysen.

* Sandril and Provell were graciously furnished us for this investigation by Eli Lilly and Company.

** Ansolysen was graciously furnished us for this investigation by Wyeth Laboratories, Inc.

peared without our using mercurial diuretics or digitalis preparations.

We did not strive to obtain normotensive levels in every patient, for we felt that the greatest drop in blood pressure obtainable from the smallest amount of drug treatment would benefit the patient most. During the time that the patient was taking Ansolysen, he was cautioned repeatedly to avoid constipation. Saline laxatives were advocated as indicated. We did not prescribe prostigamine or pilocarpine routinely, but they were given occasionally, as needed. In this way, orthostatic hypotension was largely avoided. No limitation on salt intake was made, for a low-salt diet accentuates orthostatic hypotension. It was suggested that patients take their Ansolysen at 7 a.m., 3 p.m., and 11 p.m. In this way, blood pressure determinations could easily be correlated with the time of taking medication. Orthostatic hypotension was discussed fully with the patients, so that they would know what to do if it occurred and would not be alarmed. Home blood pressure determinations were not attempted, although we fully recognized the difference between home and office blood pressure readings. We felt that for most patients the added expense of purchasing a sphygmomanometer was unwarranted.

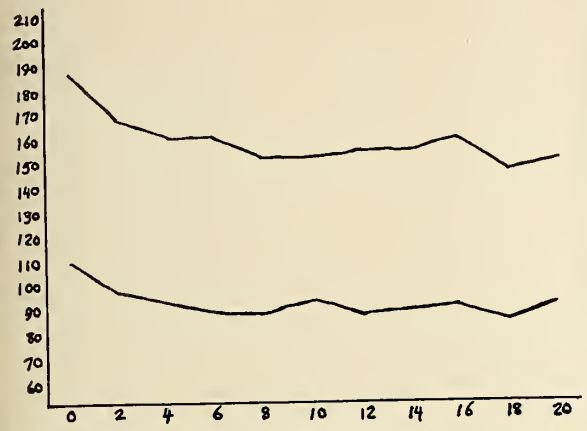


Figure 3. Average blood pressure readings on Reserpine.

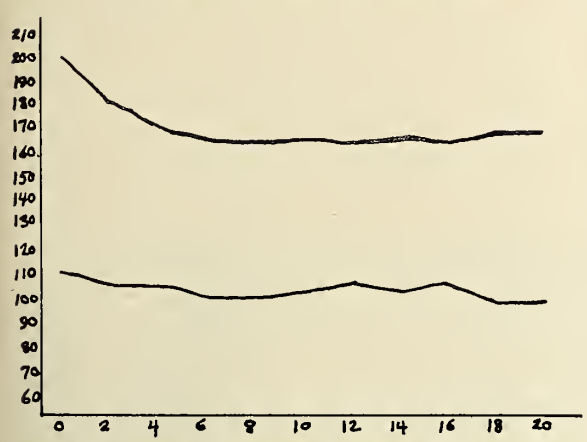


Figure 4. Average blood pressure readings on Protoveratrine.

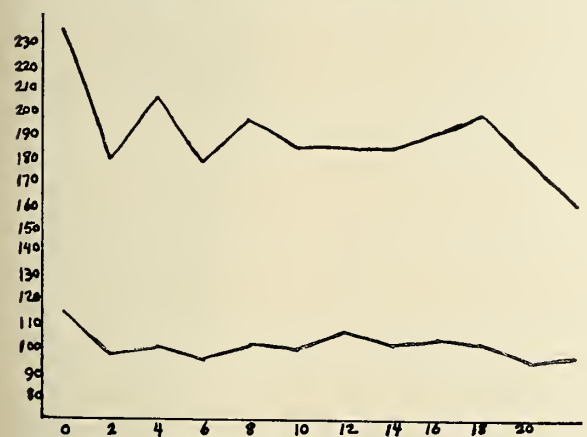


Figure 5. Average blood pressure readings of patients on Ansolysen who had previously been on Reserpine, and were continued on a combination of Reserpine and Protoveratrine.

During the early part of our investigation, some patients were started on Provell, and the Rauwolfia alkaloids were added later. In this way we were able to check the efficiency of this drug alone.

RESULTS

During this investigation, one patient died of acute myocardial infarction. We did not feel that that fatality was attributable to the drug therapy, however, for normotensive levels had been obtained on this patient, and at the time of the infarction and for two months previously, he had not been receiving any medication. One patient developed a minor cerebral vascular accident while taking medication, but while her blood pressure was at normotensive levels.

Figure 3 summarizes the average blood pressure readings of 24 patients who received Reserpine (Sandril) over a period of four or more months. It was noted that these patients developed a sense of physical well being prior to any noticeable drop in their blood pressure readings. Very little objective effect was noted until the patient had taken the drug for two weeks or longer. We felt that the drop in diastolic blood pressure and the bradycardia were the most beneficial results obtained from the use of Sandril. On 0.25 mg. taken at bedtime, many of these patients have been maintained at normotensive levels for over one year.

Figure 4 summarizes the average blood pressure readings of eight patients taking Protoveratrin (Provell) only. It should be noted here that while the systolic blood pressure fell to reasonable levels, the diastolic blood pressure was not affected nearly so much as with the use of Sandril.

Figure 5 summarizes the average blood pressure levels obtained on six patients who were placed on Ansolysen after attaining the maximum effect of Sandril and Provell. The management of these patients was somewhat more difficult with Ansoly-

sen than with the other drugs, and we felt that a moderate fall in blood pressure, even though it had not dropped to normotensive levels, was adequate. Some of these patients were in mild to moderate cardiac failure prior to the institution of Ansolysen therapy. In those cases, the cardiac failure responded well to the drop in blood pressure, and it was unnecessary either to digitalize the patients or to give them mercurial diuretics.

We have not noted a return to normality in any electrocardiographic tracings which had been considered abnormal prior to the institution of hypotensive therapy. We feel, however, that any reversion to normality in electrocardiographic tracings will probably take longer than we have been able to follow the patients thus far.

DISCUSSION

Search for more adequate medical treatment of essential hypertension has been aided recently by the introduction of five new drugs. Although it is felt that none of these drugs or combinations of them constitute the ultimate medical treatment of essential hypertension, evidence is continuing to accumulate that they are aides in the relief of hypertensive levels. In the mild hypertensive patient, either Rauwolfia alkaloids or Protoveratrin products, alone or in combination, will frequently reduce the blood pressure to normotensive levels. For the more severe hypertensive, the more potent ganglionic blocking agents such as hexamethonium and Ansolysen can be used, but only under strictly controlled conditions. Apresoline alone or in combination with other drugs definitely causes a reduction in blood pressure levels. Because of its dangerous side effects, however, it should be used only with the strictest caution. We feel that it is definitely better to undertreat the patient and be satisfied with moderate reduction in blood pressure than to overtreat him and endanger his life. Even a moderate reduction in blood pressure levels will definitely lessen the cardiac work load and ease the strain on the various vital organs and the peripheral vascular system. Because hexamethonium and Ansolysen will produce gastrointestinal immotility, constipation must be carefully avoided.

SUMMARY

A series of 36 cases who have been followed from four to twelve months on one or more of the newer hypotensive drugs has been presented. In moderate hypertension, the Rauwolfia alkaloids and Protoveratrine are considered safe in the hands of general practitioners and can be used on ambulatory patients. Apresoline and hexamethonium are not considered safe for ambulatory cases because of their disturbing side effects. A new drug, Ansolysen, is a definite improvement for the more severe hypertensive, but it should be used only in treating those patients upon whom close supervision can be exercised, and its use should probably be limited to those physicians who are well aware of its potentials.

BIBLIOGRAPHY

1. Freis, E. D., Partenope, E. A., Lilienfield, L. S., and Rose, J. C.: Clinical appraisal of Pentapyrrolidinium (M & R 2050) in hypertensive patients. Circulation, 9:540-546, (Apr.) 1954.
2. Schroeder, M. A., Morrow, J. D., and Perry, H. M., Jr.: Studies on the control of hypertension by Hyphex. I. Effects on blood pressure. Circulation, 8:672-680, (Nov.) 1953.
3. Grob, D., and Langford, H. G.: Further observations on the effects of autonomic blocking agents in patients with hypertension. Circulation, 8:205-223, (Aug.) 1953.
4. Freis, E. D., *et al.*: Hemodynamic effects of hypotensive drugs in man. Circulation, 8:199-204, (Aug.) 1953.
5. Hafkenschiel, J. H., and Lindauer, M. A.: 1-Hydrazinophthalazine (Apresoline) in treatment of hypertension: two year study. Circulation, 7:52-57, (Jan.) 1953.
6. Master, A. M.: Hypertension and coronary occlusion. Circulation, 8:170-177, (Aug.) 1953.
7. Morrow, J. D., Schroeder, H. D., and Perry, H. M., Jr.: Studies on control of hypertension by Hyphex. II. Toxic reactions and side-effects. Circulation, 8:829-839, (Dec.) 1953.
8. Wilkins, R. W.: Hypertension: recent trends in treatment. M. Clin. North America, September, 1953, pp. 1303-1312.
9. Freis, E. D.: Recent developments in treatment of hypertension. M. Clin. North America, March, 1954, pp. 363-374.
10. Sieber, M. A., Grimson, K. S., and Orgain, E. S.: Newer drugs in treatment of hypertension. I. Use of hexamethonium salts. Circulation, 8:840-848, (Dec.) 1953.
11. Green, D. M., and Ellis, E. J.: Intravenous hexamethonium sensitivity and responses to oral treatment. Circulation, 9:521-526, (Apr.) 1954.
12. Wolferth, C. C.: Observations upon management of arterial hypertension. M. Clin. North America, November, 1953, pp. 1647-1655.

Health Careers Guidebook

The National Health Council, with the cooperation of the Equitable Life Assurance Society of the United States (New York), has just published a 160-page, profusely illustrated HEALTH CAREERS GUIDEBOOK designed to serve as text material in high school and junior college vocational guidance programs. Each of the 29,000 secondary schools and junior colleges in the country has been sent a copy. For individual students, a lesser, but still extensive, compendium of health careers is available. Requests for copies should be sent direct to the Council, P.O. Box No. 1400, New York City 1.

County medical societies have been requested to cooperate with the schools in counseling students who express interest in medicine, nursing or any others of the occupations in the health field, and it is expected that the booklets will be of considerable assistance to them in that work.

Diagnosis and Treatment of

Diverticulosis and Diverticulitis

LAWRENCE O. ELY, M.D.

DES MOINES

Because diverticulosis is a degenerative defect of the colon, its incidence varies directly with age. Diverticulitis is a disease due to secondary infection in the defects of diverticulosis. The number of people older than 50 is increasing each year. Therefore, the number of cases of diverticulosis and diverticulitis is growing too. The incidences of these diseases are unknown. Various doctors have estimated that diverticulosis of the colon afflicts between 25 and 50 per cent of the age group that has been referred to, and of them, approximately 15 or 20 per cent develop the inflammatory changes known as diverticulitis. If these estimates are relatively accurate, then as many as one tenth of the people over 50 years of age may be experiencing the symptoms of diverticulitis.

Diverticulosis is most frequently found in the left half of the colon, especially in the sigmoid area. Rarely do these lesions develop in the right half, and if lesions are present there, they usually give no difficulty. Even if the right-sided lesions become infected, complications necessitating surgical treatment are infrequent, probably because of the long, comparatively mobile mesentery in that part of the colon.

Figure 1 shows the typical roentgenographic findings in a case of diverticulosis. Notice that the lesions are more numerous in the sigmoid colon. None are to be seen in the right half of the colon. The ostia of these pouches are quite small. Thus, by sigmoidoscopic examination one does not visualize the lesions.

Diverticulosis is asymptomatic, and most doctors feel that it requires no treatment. However it may be extremely difficult to know when inflammatory changes will produce a diverticulitis. For that reason, I feel that all known cases of diverticulosis should be put on a diet from which high-residue, irritating foods have been removed. In fact, all older people who have bowel symptoms should be placed on such a diet, inasmuch as bowel symptoms in such patients are most commonly due to mild diverticulitis.

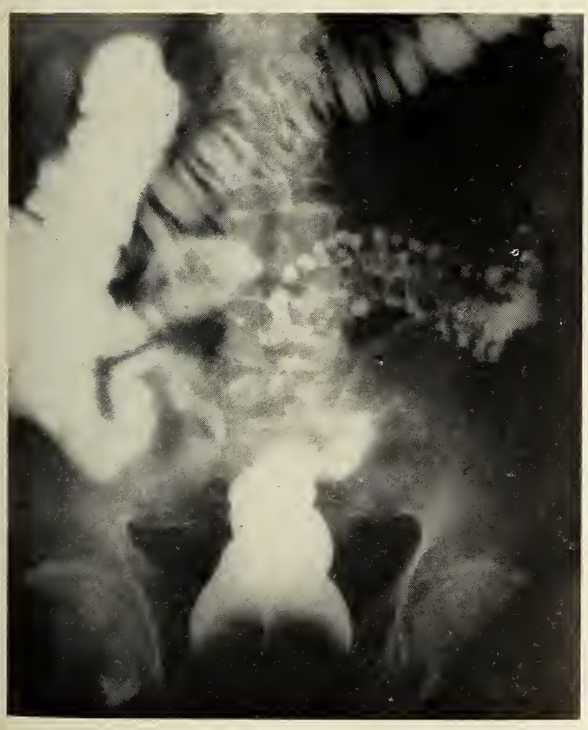


Figure 1. Diverticulosis.



Figure 2. Diverticulitis

SYMPTOMS

The symptoms of diverticulitis are bizarre. The inflammatory changes may or may not produce irritation of the bowel itself. The complaints may be concerned with changes in the bowel movement, such as diarrhea, constipation or melena, or they may be non-specific, e.g., vague abdominal pain, especially in the left lower quadrant. This left lower abdominal pain is sometimes referred to as "left-sided appendicitis." If the lesions lie in proximity to the ureter or bladder, they may irritate those structures, giving rise to complaints in the completely separate urinary system.

Both the sigmoidoscopic and the X-ray examinations are useful in diagnosis. Figure 2 shows the typical roentgenographic findings in a case of diverticulitis. Sometimes it is difficult to differentiate between diverticulitis and carcinoma by X-ray examination. If the lesion can be visualized by sigmoidoscopic examination, a biopsy is often helpful for differentiation. But if the lesion appears to be inflammatory, biopsies should be taken with care, for perforation is very easily accomplished in an edematous, friable bowel wall.

TREATMENT

The primary treatment of divertulitis is medical. The diet should be rigidly limited. All irritating foods such as pepper and other condiments, acid fruit juices, and bulk-forming foods such as cabbage, lettuce, green beans, popcorn and peanuts should be forbidden. Vegetable purees are a valuable adjunct in the dietary management of these cases. If constipation is a factor, a mild laxative such as Metamucil should also be used. These patients must be impressed with the necessity of their adherence to this diet. After four to six months of treatment, as symptoms subside, they have a tendency to drop the restrictions. However, if long-continued regression of the inflammatory changes is to be achieved, these patients, like diabetics, must adhere to the diet indefinitely.

Surgical management of diverticulitis is employed for the complications of the disease. I have divided these indications into two groups: the absolute and the elective. Absolute indications include such complications as obstruction, perforation into the peritoneal cavity, and fistula formation either between the bowel and bladder, bowel and skin, or bowel and bowel. Elective indications include severe pain uncontrolled by medical management, recurring attacks of debilitating diarrhea despite careful diet restrictions, and repeated massive gastrointestinal bleeding when there is no discernible intestinal lesion other than diverticulitis. Cases of diverticulitis in young people should be resected earlier and more radically because of

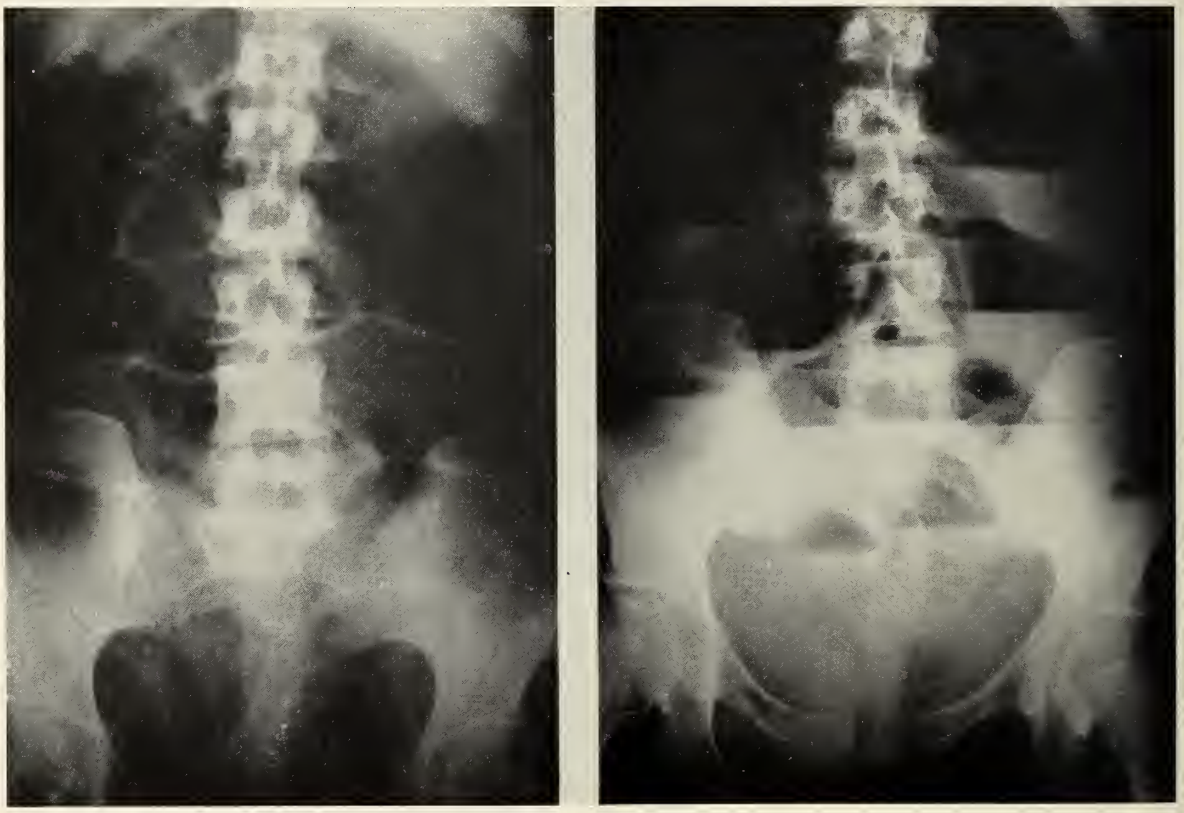


Figure 3. Intestinal obstruction.

the probability that additional complications would otherwise occur in later years.

Figure 3 shows the flat plate and upright abdominal film on a patient whose complaints were vague abdominal pain, progressive distention and finally vomiting. An indurated, friable mass, probably inflammatory, was found on exploration of the sigmoid. A loop colostomy of the right half of the transverse colon was performed.

The colostomy should be in the transverse colon so that the involved colon can be resected and an end-to-end anastomosis done later. The interval between the colostomy and the resection varies. It may be as short as six to eight weeks if the inflammatory area is small or if carcinoma is suspected. Or it may be as long as ten to twelve months if wide-spread, inflammatory changes are present, with involvements of other structures such as the bladder, iliac vessels or ureter. Four to six months is the average interval. Prior to resection, the distal bowel is prepared with antibiotics and enemas. A primary resection and an end-to-end anastomosis are then done. Ten to fifteen days after resection, the transverse-loop colostomy can be closed.

Patients having perforation should have a transverse-loop colostomy. At the same time, the perforation is sutured. In no instance should a perforation be sutured and no proximal colostomy done. At a later date, the diseased distal segment can be prepared and the sigmoid area resected. An end-to-end anastomosis between the splenic flexure and distal sigmoid colon is done. Following this procedure, the colostomy is closed.

Patients having fistula formation should have a transverse colostomy, but this colostomy should be of the divided-loop type so that there can be no spillage of fecal material into the distal segment. After a suitable interval, the involved area and fistula of the distal segment can be excised and an end-to-end colocolostomy done. The divided-loop colostomy is closed after 10-15 days.

The mortality due to colon resection has been reduced greatly during the past 20 years. This reduction is a consequence of the use of antibiotics in bowel preparation, better anesthesia, availability of blood for transfusion and improved surgical technics. In elective surgery, the mortality in colon resection is less than 5 per cent. For this reason, more elective cases of diverticulitis are being resected. This type of operation is desirable because a primary resection and anastomosis can be done in one stage. Because no proximal colostomy is necessary, the patient has only one operation, instead of a series of three. As time goes on, I am sure that doctors will choose to resect, as an elective procedure in more of the refractory cases of diverticulitis, rather than to wait for the absolute surgical indications.

SUMMARY

1. Diverticulosis and diverticulitis are most common in older people.
2. Diverticulosis produces no symptoms and may be diagnosed only by visualization of the typical defects in the colon by means of X-ray examination.
3. Except for a few diet restrictions, asymptomatic diverticulosis requires no treatment.
4. The symptoms of diverticulitis are bizarre.
5. Most cases of diverticulitis can be controlled by medical management.
6. Complications of diverticulitis are treated by surgical intervention.

ISMS Television Program Wins National Award

The Iowa State Medical Society's television series "Your Health" was the recipient of a first award, presented by the Institute for Education by Radio and Television, in Columbus, Ohio, in mid-April. The Institute is conducted under the auspices of the Ohio State University.

The "Your Health" programs were given the first award in the division of special-interest broadcasts, and a citation was made to station WOI-TV (Ames) and the Society as follows: "For presenting important and difficult content which is often regarded visually distasteful in an informative and interesting manner; for illustrating that educational and medical organizations can cooperatively produce television programs not only for their mutual advantage but more importantly for the general good."

The presentation on plastic surgery, broadcast November 5, 1954, was the one on which the series was judged. The participants in that telecast were Dr. A. C. Sorenson and Jane Holmes, of Davenport, and Ray Stewart, of Ames.

The ISMS telecasts consist of 13-week series. No presentations were aired over WOI-TV between mid-December and the latter part of April, but the broadcasts were resumed on April 28 and will be continued, on Thursday evenings at 8:30, until the latter part of the coming summer. A schedule of the subjects for May will be found elsewhere in this issue of the JOURNAL, under the heading "Speakers' Bureau Schedules."

The programs are directed by Mr. Ray Stewart, of station WOI-TV, and the scripts are prepared by Miss Tina Preftakes, a member of the ISMS staff. The physicians who appear on the telecasts are members of the Society.

Chyle Peritonitis

REPORT OF A CASE*

JOSEPH TROTZIG, M.D.

AKRON, IOWA

THE SUDDEN release of chyle into the abdominal cavity produces an acute peritoneal reaction—the so-called chyle peritonitis. It is a rare condition and should not be confused with chylous ascites, which is a slowly developing process characterized more by abdominal distention than by peritoneal irritation. In contrast with chylous ascites, which has been reported frequently enough not to be considered an unusual condition, chyle peritonitis is one of the medical rarities. Information regarding it is meager and is based chiefly on scattered case reports.

Hoffman,[1] in a careful review of the literature last year, found that a total of 23 cases had been reported. He added an account of a case of his own, making a total of 24. It was possible to make the diagnosis only after an exploratory laparotomy, and in none of the reported cases was the condition suspected preoperatively. The etiology varied widely, and in 10 cases was unknown. Of the others, 3 were due to thoracic duct obstruction, 3 to intestinal obstruction, 2 to strangulated scrotal hernia, 1 to mesenteric adenitis, and 1 to a ruptured chylous cyst.[2] The clinical picture described in these cases, however, was consistently similar. The patients presented the signs and symptoms of acute abdominal disorder, which led to the diagnosis of acute appendicitis in 6 of the patients and of perforated ulcer in 4 of them. The treatment consisted of laparotomy, with the elimination of pathologic conditions when found. The ruptured chylous cyst was packed and marsupialized. When no cause could be found, the removal of irritating chyle and a postoperative period of lowered food intake apparently permitted the leak to seal itself. All patients recovered but one,[3] who died with miliary tuberculosis about two months following surgery.

This case report describes a patient with chyle peritonitis due to rupture of a chylous mesenteric cyst. This is the second ruptured chylous cyst, and the 25th case of chyle peritonitis to be reported.

CASE REPORT

M. S., a ten-year-old white girl, and one of identical twins, was first seen on the evening of February 21, 1954, complaining of abdominal soreness which had started at three that afternoon. Shortly after the pain started, the patient vomited once and continued to be slightly nauseated.

Her past medical history was not unusual, with the possible exception that for several months she had been reluctant to stand erect in response to criticism about her poor posture. About one month

* Dr. R. T. Tidrick, of the Department of Surgery at the SUI College of Medicine, made his operative record and photographs available to Dr. Trotzig for this report.



Figure 1. Chylous cyst in jejunal mesentery.

previously, she had had a similar, but less severe, episode of abdominal pain which subsided spontaneously in a day. She had performed some strenuous dancing lessons the day before the present episode.

On examination, the patient appeared to be a normally-developed child of ten years who seemed to be having moderate discomfort, but was not acutely ill. Her temperature was 98° F., her pulse rate was 104 and her respirations were 28. There was mild tenderness throughout her abdomen, with resistance to deep palpation. This latter was felt probably to be due to muscle soreness following excessive exercise. Bowel sounds were normal. She was given a mild sedative and told to report again in the morning if her condition was unimproved.

She was next seen the following afternoon. The pain was persistent and more severe. She had had no more vomiting, but was nauseated. Her temperature was 99.6° F., pulse 110 and respirations 30. She had developed marked abdominal tenderness, localized in the right iliac fossa and accompanied by rigidity and rebound tenderness. Her white blood count was 12,150, her red blood count was 5,600,000 and her hemoglobin was 13.6 Gm. Urinalysis was normal. A diagnosis of acute appendicitis was made.

With the patient under general anesthesia, the abdomen was entered through a right rectus incision. When the peritoneal cavity had been opened, a milky fluid was seen to coat the abdominal contents. Because of the absence of odor, it was felt that this fluid was not suppurative in origin, though its identity was unknown. The appendix appeared normal. Its serosa was slightly injected, but no more so than other visceral peritoneal surfaces. Approximately 100 cc. of milky fluid had pooled in the pelvis. This was aspirated and saved for examination.

Further exploration revealed a firm, smooth mass about the size of an orange situated in the left upper abdomen. It was quite firmly fixed and could not be visualized through the incision. The mass was thought to be retroperitoneal, possibly a renal tumor. No further attempt was made to expose it. The appendix was removed, and the abdomen was closed, with a rubber drain in the lower end of the incision. While the patient was still anesthetized, the mass was easily palpable through the abdominal wall.

Postoperatively, the patient was extremely nauseated for two days and was given intravenous and subcutaneous fluids. There was profuse drainage of milky and serosanguineous fluid from the wound during the first 24 hours, but almost none thereafter. The drain was gradually shortened and removed on the sixth postoperative day. Her temperature never rose about 100° F. and her abdomen remained flat and soft.

A pathologist reported that the milky fluid which had been aspirated from the peritoneal cavity was chyle. Intravenous pyelograms were normal.



Figure 2. Gross specimen with excised jejunum.

By March 13, the patient had completely recovered from surgery. The mass was still palpable in the left upper quadrant. A tentative diagnosis of chylous mesenteric cyst was made, and the patient was referred to Dr. R. T. Tidrick at University Hospitals, Iowa City, for definitive surgery.

Thorough X-ray examinations of the gastrointestinal and urinary tracts were made and found to be normal. The patient was seen by various members of the surgical staff at University Hospitals, and it was generally agreed that reoperation was obligatory.

Laparotomy was performed on March 23, and the tumor was exposed through a transverse incision in the left upper abdomen. A lobulated mesenteric cyst the size of a fist was found in the jejunal mesentery, 24 inches distal to the ligament of Treitz (Figure 1). It protruded deep into the mesentery, close to the origin of the superior mesenteric vessels. There were a number of bumpy excressences on the serosal surface of the cyst which, from the inflammatory reaction, appeared to have been the site of the previous rupture.

There were two small areas of lymphectasia noticed under the serosa of the small bowel—neither of which was more than two or three millimeters in diameter. There was no significant lymphadenopathy, and there were no retroperitoneal tumors. Both kidneys were normal. An attempt was made to see whether the cyst could be removed by dissection into the mesentery without disturbing the adjacent bowel. This procedure was impossible because of adherence of the arterial arcade to the cyst wall. It was therefore necessary to resect 7.5 inches of jejunum with the wedge of mesentery which contained the cyst (Figure 2). An end-to-end jejunal anastomosis was performed, and the abdomen was closed.

COMMENT

Histological examination of the cyst showed it to be a multilocular chylous cyst with no evidence of malignancy.

The patient made an uneventful recovery and has been well since.

This unusual case again demonstrates the acute peritoneal reaction produced by free chyle in the peritoneal cavity. The leakage from the chylous mesenteric cyst was probably related to mechanical forces exerted during strenuous exercise. Gravitation of the free chyle ultimately produced an acute lower abdominal emergency resembling appendicitis. Muscle guarding against deep palpation masked the presence of the abdominal tumor. The rarity of chyle peritonitis precludes its diagnosis prior to surgical exploration, but the presence of non-odorous milky fluid in the abdominal cavity should alert the surgeon to search for its cause.

BIBLIOGRAPHY

1. Hoffman, W.: Free chyle in the acute abdomen: so-called chyle peritonitis. Surg. Gynec. & Obst., Internat. Abst. Surg., **98**:209-220, (Mar.) 1954.

2. Dutton, F. K.: Report of a case of ruptured chylous mesenteric cyst. Case report. N. England J. Med., **203**:1032-1034, (Nov. 20) 1930.

3. Reboiras, J. I., and Giralt, M. A.: Ascitis quilifera en una seudoapendicitis aguda tuberculosa. Granulia. Arch. argent. de pediat., **9**:514-521, (May) 1938.

Emotional Problems of the Chronically Ill

SIDNEY L. SANDS, M.D.

DES MOINES

THE PURPOSE of this paper is two-fold: (1) to discuss the psychobiology of human reactions to disease and injury, and (2) to develop general principles for the prevention and management of emotional problems that arise in the course of such conditions.

Attention to these matters is being forced upon us by certain changes in the composition of our population—changes affecting not only socio-economics but the very practice of medicine itself. We are witnessing a remarkable increase in the number of persons over 60 years of age and a similar increase in the number of people of all ages with chronic disability due to disease or injury. In part, these phenomena are our own handiwork. Antibiotics and modern surgical technics, supported by solid advances in both public health practices and basic knowledge of physiology, have saved lives, either by preventing disease or by curing or modifying its effects. The chronically disabled and the aged, by bringing with them problems that demand new concepts of etiology and therapy, are presenting us a new and exciting challenge.

New drugs and surgical technics are not the only indications of medical progress. Our history is also one of evolving concepts, new ways of thinking about problems. Among the really significant contributions, we should certainly accept the revolutionary advance made when early physicians insisted that disease was due to natural causes, as opposed to supernatural ones. Much later came an equally important concept—one in which disease was seen as the product of interaction between the person and the pathogenic agent. Thus was brought about a whole new way of thinking regarding "cause," and a way was opened for modern conceptions of psychosomatic medicine. In regard to the latter, we refer to the scientific demonstration that personality affects and is affected by disease and injury—that many diseases are in fact caused or brought on by complex emotional problems, and that patients may suffer emotionally when struck down by illness or accident.

Today we are facing the advent of still more complicated developments. Early psychosomatic thinking was expressed as treating a *person-with-a-disease*. Now we must expand our ideas, for we must treat the *person-with-a-disease-in-an-environment.* At first glance we are likely to regard this as a self-evident formulation, something that we have known all of the time. In part, to be sure, such feeling is justified, but like many such ideas it is one acknowledged in theory and dismissed in application. Today we are being called upon to understand and work with the environment of the patient as it is involved in his total capacity to function. In brief, we are faced with what might be called "medical sociology," something which is not, of course, to be confused with socialized medicine.

It demands that in addition to understanding the pathophysiology of a given disease, we must also know what external factors in both patient and environment influence his adjustment to his illness and what ones can be exploited to aid him in recovering.

PSYCHOBIOLOGY OF DISEASE

When I discuss the psychobiology of disease, I am concerned with the total response of the organism to disease or injury, but I can best approach the subject in terms of fundamental properties or characteristics of the organism itself. The very word *organism* is a semantic trap to the extent that while it refers to a total "thing," it also refers to certain qualities of that entity. It denotes a dynamic relationship of its parts—in brief, its functional organization. The word has this added meaning whether it is applied to a one-celled microorganism or to complex multi-organ creatures like ourselves. The parts, working together harmoniously and purposefully, compose the organism.

Medicine, like any of the other sciences, is concerned with the discovery of general "laws" which have both explanatory functions and predictive potential. In the growth of our understanding of organisms, we encounter a general principle of great usefulness: the concept of homeostasis. Literally, the word *homeostasis* means "standing equally" and implies a state of equilibrium in a static sense. Actually, however, the term has come to indicate a dynamic equilibrium in flux—i.e., the parts, consisting of complex sub-systems of specialized tissues, electrolytes, hormones, etc., are constantly changing in flowing patterns of physicochemical reactions. What we observe is the patterning, and we see in it a state of organization, a "steady state," to which there is a constant effort to return, whatever the more or less temporary alterations may be.

If we observe the flame of a Bunsen burner, we can see discrete sections and a general form, all of which tend to remain constant despite the fact that individual molecules of gas are moving at high velocities and are changing their physical state as they enter and leave the system. A breeze from the laboratory window or alterations in the amount of oxygen and in the supply of gas entering the base of the burner produce changes in the pattern, but we note the ever-present struggle to maintain organization.

So it is with living things as well. When stimulation is acutely excessive or chronically exhausting, we can easily see the manifestations of disturbed homeostasis, ranging from destruction of the organism to various levels and forms of impairment of function which we classify in terms of disease and injury. Furthermore, even in these latter states we see efforts on the part of the organism to establish some measure of stability and pattern, even at a level somewhat lower than the accustomed one.

The manifestations of disease or injury are products not only of the pathological stress, but also of the organism's defensive reactions. Fever, cough, leukocytosis, edema and limp are thus as much a function of defense as they are effects of specific stresses. For many years it has been known that in hypnotic states one can induce these physiologic phenomena by suggesting to the subject that he is sick or has been injured.[1] These reactions are adaptive in that they seek to master the stress and establish a state of organization, of homeostasis. That these responses may be ineffective, or that if prolonged, they can be injurious in themselves attests to the severity of the stress and does not alter their purpose and meaning.

The human organism is as much governed by these "laws" as any other living creature, but much more is involved. The elements to be integrated or organized include not only those things we most easily study with the technics of physiology and related sciences, but also such things as values, fears, hopes, attitudes—the matrix of memories which have powerful stimulus value in the lives of all of us. Furthermore, we must take into account their relationship with those environmental factors which were referred to earlier. It is not difficult to understand the relationship between oxygen deficit and increased cardiorespiratory activity. It is equally easy to define the relationship between the speeding automobile and the pedestrian who has been struck by it. But understanding comes less easily when we try to grasp the connections among ideas, emotions and events less obviously related in the etiology of disease.

We must be ready to see the roles played by family relationships, occupational and economic status, insurance, social security and a myriad of other complex values and attitudes in the patient's struggle to adapt. If we accept the notion that ideas and their emotional concomitants can affect the functioning of various organs, then we can more easily see that ideas are inner representations of the "meaning" of external factors. We may ask, "What does the patient's job 'mean' to him?" and "What does his family 'mean' to him?" The meanings he attaches to these relationships, his interpretations, have stimulus values which can operate to produce healthy or unhealthy reactions, not only in his general behavior, but also in his body. To complicate the problem still further, we are often confronted by the fact that at the time a patient reacts with disorganized behavior, we can find no startlingly outstanding factor in his immediate environment to which we can conveniently point as the cause of his reactions. To understand the phenomena, we must make a further exploration of some fundamental properties of the organism.

Man is wondrously made, and his central nervous system is the most wondrous of his parts. The one attribute he has which is particularly relevant

to the subject at hand is his capacity for *time-binding*. This term, employed by Korzybski,[2] designates the ability to act in relation to past and even future events. Animals are *space-binding* in that they can change their position in space and thus act more efficiently than lower forms of life in self-preservative activities. They can, in response to inner needs and external signals, move in search of food or away from natural enemies, but they are extremely limited in their ability to form general concepts and to go beyond the establishment of habit patterns on a trial and error basis. Neither can they transmit concepts or improved skills to one another or from one generation to the next. An ability to do so requires a far more highly developed cerebral apparatus and one that permits the use of language. The human organism, however, can store impressions and, through the use of language in the process of reasoning, can derive conclusions which themselves can be stored for future reference or be used as bases for action even in the absence of immediate tissue needs or external stimuli. In short, we can relive our past experiences and plan future actions, spanning many years in a few moments. Great as this advantage is, it is a mixed blessing, for at times we can be so adversely affected by past experiences that present behavior is disorganized and our ability to plan for the future is seriously impaired.

Thus it is that seemingly trivial events can at times evoke violent reactions, and illness or injury can be catastrophic for some and not for others. So sensitive is this mechanism that the reactions can disturb metabolism, the ability to resist infection and the ability efficiently to perform basic physical functions such as digestion, elimination and coitus. Indeed, just as an idea can cause salivation, elimination or sexual excitation in normal persons, so ideas can provoke pathological responses in the various organs and tissues of our bodies, as well as disorganization of those complex actions which are best described in the language of behavior pathology. We humans are part of a dynamic process in a multidimensional field. Any stress or defect anywhere is capable of disorganizing the whole process and of arousing defensive reactions, the goal of which is reorganization at some level.

When we, as physicians, approach our patients, we must carry certain basic questions in the foreground of our thinking: (1) "Who is sick?" (2) "What is his disease?" (3) "What is his stage of life?" and (4) "What is his life situation?" It was much easier being a doctor when all that physicians sought to know was the invading organism, the locus of the pathology and the standard drugs or surgical procedures to prescribe. But if our practice has become complex, time-consuming and at times almost unmanageable, let us remind ourselves that in doing our best to conduct it as we have learned it should be conducted, we are fulfilling the role that is connoted by the word *physician*. If we fail to keep pace with this development in medical thinking, we shall certainly have failed our patients and ourselves.

Disease at any time is a *dis*organizing stress. We are "sick" when our natural defenses have been overwhelmed and we must retreat to more primitive levels of adjustment and reorganization. If, in turn, these newly erected defenses are breached, we collapse and die. Disorganization and retreat are accompanied by fear, mounting to panic. Pain, fever, nausea, paralysis, asthenia, anorexia and all of the myriad other evidences of "something being wrong" are frightening. When danger has been alleviated and the patient can begin to think less about death and more about his future life, he may again be acutely distressed by his concept of his residual illness, his evaluation of his financial state, and his notions about his work capacity and his capabilities as a man, husband and father. A woman faces equally grave doubts and fears, especially as regards her role as a wife and mother.

The diseases which become chronic, in that they limit the activity of the patient over periods of time of such length as to require readjustment of the life of the patient and his family, are the ones most likely to give rise to serious emotional problems. Acute, severe, short-term, non-fatal diseases or injuries can precipitate a psychoneurosis, a psychotic state or perhaps a brief period of confusion and panic, but in the previously well-adjusted organism these tend to clear rapidly. In the previously maladjusted individual, the psychological reaction may be more prolonged and treatment-resistant. But in the face of chronic disease, any person is eligible for emotional problems, and the factors involve more than just *his* particular personality configuration. Any man or woman in the normal pursuit of his way of life is fearful of the impact that incapacity will have upon himself *and* upon those who depend upon him. The descent from healthy participation in social, occupational, family and sexual roles into dependency and the state of being a burden is always disturbing and is often catastrophic.

To a degree, it has always been thus, but it is growing steadily worse because of both technological and social changes in our western civilization. Overcrowded housing, the economics of medical care, the dependency upon a wide range of abstract services for survival, changes in family-group values—all of these contribute to the insecurity of the individual. Sick people are always less secure than well people, and the chronically ill are the ones who must find new ways of compensating for their terrible feelings of insecurity. They become aware as time goes by that the distance between themselves and the members of their families is increasing. They cannot avoid being frustrated by their isolation from many activities which their former colleagues continue to enjoy. Many become bitter and feel themselves vic-

tims of a malevolent fate—singled out by God, nature or life for cruel and unjust treatment.

It is little wonder that persons already maladjusted find themselves particularly vulnerable to the psychologic problems of chronic disease. It stands to reason that a person who has already been forced to retreat, or at least to maintain a posture of defense in his adaptive functions, is less capable of withstanding the complex stresses of both his disease and his life situation.

Lest we think of pathologic reactions as limited to manifestations of anxiety, I wish in passing to point out a group of people whom we must be careful to recognize, so as to avoid being misled by their special behavior. We can easily recognize the abnormality of reactions that feature depression, mania, delirium or schizoid withdrawal, but we may be fooled by patients who unwittingly discover that illness has some advantages. For them, the limitations imposed by disease and the social status of being ill become tools for exploiting a previously resistant environment or compensating for unresolved neurotic conflicts. Thus, we may find a patient who rules the house from his wheelchair and who binds every member of his family to himself. Or we may see a previously anxiety-ridden individual, one who has been unable to engage in mature interpersonal relationships, but who has become much calmer in the presence of organic disease and turns into an "ideal" patient—ideal until it is apparent that he or she is failing to respond to therapy or growing more anxious as "health" returns. More will be said of such patients later in this paper.

It is impossible in this discussion to cover the specific dynamic relationships between given somatic syndromes and particular behavioral reactions. The reader is referred to a monograph by Ruesch *et al.*[3] which deals with some aspects of this problem. In addition, I have included in the bibliography[4, 5, 6, 7, 8, 9] some representative works in this field. But not to seem neglectful of this phase of the subject, I should like to make some general observations. As we reach a given diagnosis of a patient's primary disease, we must keep in mind the manifest effects that it can be expected to have upon him. Thus, we expect conditions which produce paralyses and deformities to have different effects upon the "person" than do the diseases which are featured by attacks of pain and threats of death (i.e., coronary disease). Similarly, the patient with hypertension is known to face different problems than does one with ulcerative colitis or ileitis. When we begin our evaluation of the disease phenomena and then consider them in terms of the specific personality involved, we begin to grasp the total picture. Paralysis occurring in an athletic man can be expected to have different emotional repercussions than it would have in a man of sedentary interests. Thus, age, occupation, role and concept of self can be potent factors in a patient's emotional response to a given disease or injury. In addition, we also must deal with predilection for given diseases because of certain personality problems. The whole field of psychosomatic medicine deals with matters such as attempting to define what kinds of people are predisposed to what diseases. For the non-psychiatric physician, the main thing is to keep thinking in this frame of reference so as to have a breadth of awareness for all of the complex possibilities in any particular case.

Evaluation and Management of the Problem

It goes without saying that as physicians we must "know" our patients. In the presence of evidence that the patient will be chronically ill, it becomes extremely important that before entering any serious discussions with him the doctor should question the family or any other reliable informants about the patient's general capacities for adjustment, about his values, his hopes and his fears. It is well for the doctor to understand the individual's relationships with his family, his church, his employers and his friends. In short, the physician must assess his patient's psychological and social assets and liabilities, and must discover what resources within the patient's environment can profitably be utilized in combatting the difficulties that will ensue.

In the course of the disease, we can recognize certain critical periods, each of which requires careful management. But if there were to be just one admonition given to guide physicians in all of their contacts with these patients, it would be, *"Don't talk too much!"* Few of us think of ourselves as excessively talkative, but all of us err at times. However much we may think of ourselves as level-headed, emotionally uninvolved or even hard-boiled, we may say more than we should because we are ill at ease or unsure of ourselves. In addition, it is our earnest desire to "make it easy" for the patient. Being aware of his sensitivities and fears, we want to follow the revelation of our diagnosis, a bitter draught, by saying a few soothing and reassuring words. But at that point, when we are working hardest, we are likely to lose our best chance to help the patient. But that is just one of the critical periods in the course of the patient's chronic illness about which I have some suggestions to offer, and I should like to phrase them as prescriptions, rather than as proscriptions.

A. *The Diagnostic Phase.* It is logical to assume that when the doctor has concluded a careful study, the patient will want to know what interpretations he has made. At this point the physician should have finished collecting the non-medical data to which I have already referred, and if he hasn't, he should tell the patient that he hasn't completed his evaluation and should proceed forthwith to get the necessary information from members of the family. If the patient fears the worst, don't pooh-pooh his fears. Better, tell him that you

don't know yet and want to be quite sure before committing yourself to a diagnosis.

Once armed with the necessary data, arrange, if you can, to see the patient in private and alone. Don't surround him with X-rays and laboratory reports. Give him the diagnosis in non-technical language and with a minimum of dramatics. AND THEN WAIT!

Too many of us rattle on with explanations, scientific jargon and what we feel are reassurances. What we often fail to recognize is that *the patient doesn't hear us.* Over and over in his mind he is hearing your diagnosis, and when your subsequent words finally begin reaching him, he is a long way behind you. His true state of mind during the few moments following your announcement of your diagnosis may not be evident to you. Though he actually is stunned, he may exhibit a composure that he doesn't feel, and you will be misled as regards the degree of his comprehension.

By waiting after making our original announcement we *allow the patient time to react emotionally.* Let the emotional reactions come out. It is better for the patient, and the physician can get some cues regarding the patient's basic reactions. Some will cry, some will obviously be stunned, and some will be angry or incredulous. But whatever the reaction, give the patient an opportunity to express it. Once discharged, the patient will begin formulating questions, and his capacity to communicate will have been immeasurably enhanced.

B. *Instituting the Program.* This may be described as the prescription phase. Having received the diagnosis and reacted, the patient must now be given a program for living. It is our responsibility to have such a program well thought out in advance, and it must fit the individual patient and his life situation. When such a program is presented, the patient will realize that his doctor has given him more personal attention than he had expected, and the realistic and sensible quality of the program will reduce his fear by breaking up the problems into observable and manageable details.

As for the program itself, one general principle must apply: *Express it in terms of what the patient can do, not what he cannot do.* Although we can never follow that maxim precisely, nor have a tailor-made program set up for all contingencies, our basic organization—our positive approach—will help us a great deal in getting the patient to accept his situation in a healthy frame of mind.

The actual planning and operation of the program involves not only the patient but all of the persons directly concerned with his situation, plus those individuals who will play some role in the management of his affairs. Family members need advice and guidance as regards their own lives as well as their relations with the patient.

In time, the services of a social worker and an occupational therapist may be needed. Contact with people trained in vocational rehabilitation may be very helpful. As physicians we cannot perform all of those services ourselves, but we can know when and how to use the facilities which apply in a given case, and it is wise for us to become acquainted with the people and the agencies in our communities who are trained in those diverse fields. Find out in advance what they can do for you. It is important for you to enable your patient to see how much he can do for himself in cooperation with others in an atmosphere of goal-directed, purposeful and realistic activity. It is not enough to outline a restricted routine of living that clearly defines the limits of action and at the same time exposes the patient both to temptations and to the security of his friends and co-workers. He must be assisted to lead a full life, but one filled with things he can do with satisfaction and safety. These new activities will have to be carefully sought for, and the patient must assist in the search. His open antagonism and his resistances must be dealt with as symptoms, not as just "cussedness."

C. *The Long Wait.* Next comes the period of slow adaptation to the long process of getting well, or perhaps just surviving. The best of us grow fidgety in any confining situation and become bored with things that once gave us pleasure. When illness, danger and dependency are added, and when they persist over a period of months and years, it is easy to understand the reactions of many of our patients. It is this which makes it so important for us to have a wide range of resources available for exploitation in the continuous development of an "active" program of living. We must never hesitate to call upon these resources for aid. Knowing the patient's aptitudes and interests, we can often put him in contact with people able to help him develop new skills and goals which will reduce his fear and which, at the same time, will be emotionally satisfying by enabling him to preserve his self-esteem. In this period, we shall do well to call upon the team of consultants discussed elsewhere to deal with these special problems. If the patient can see those people as part of a total therapeutic situation in which he must play a responsible role, he will grow eager to participate in a program that he might once have shunned.

A rather special aspect of this period relates more directly to the strictly medical regimen. Times will come when medicines are changed, when surgery is indicated and new routines are instituted. These changes should not come as shocking surprises to the patient. It is far better for the doctor to be honest with the patient and show him why these innovations are being undertaken. If the reason for change is a lack of improvement or even a deterioration in the patient's condition, he can usually be told that you are not satisfied with his progress and wish to attempt new

technics to which he may be more responsive. Again, do not forget our principal admonition: "Don't say too much!" Let the patient express himself through questions or reflections of his own, and take your cues from him.

D. *Reentering Life.* When the time comes for the patient to begin resuming some of his pre-morbid activities outside his home, he will be beset by many conflicting desires and emotions. His doubts about his capacities, his reinforced dependency needs and his anxiety about the attitudes of his group may weaken his morale and, at the same time, reproduce in him at least some of the symptoms that characterized his illness. On the other hand, some patients are so anxious to prove themselves well that they overdo and exceed their actual capacities, oftentimes with disastrous results. Here again, preparation of the patient will be most rewarding. One must encourage him to do what is proper for him, emphasizing the positive aspects of the routine rather than defining only his limitations. If we have done a good job during the "long wait" period, he will have acquired perspective and values that enable him to take advantage of the increased freedom without fear, but without the false hope that he will return to the exact level of performance that he had before he became ill. I have heard patients who had been properly handled say that they were just beginning to enjoy life. New values and broader ranges of interest, plus perhaps greater awareness of life itself, had opened their eyes, and what at one time they had regarded as essential and indispensable they now looked upon with amused wonder. They were taking more time for family life, were enjoying people more and were finding deeper satisfactions than at any previous time.

WARNING SIGNS

Thus far, we have dealt with general principles which apply to the management of chronically ill patients, orienting them in terms of what we seek to obtain, rather than in terms of what we wish to avoid. Obviously, we cannot expect perfect results. We shall make mistakes, for we can never know all of the variables in the totality of the individual and his life situation. It behooves us, then, to be alert to the earliest signs of maladjustment which may be forewarnings of serious storms ahead. Some of these will be manifest primarily in the behavior and attitudes of the patient. Others will be disguised in what we may, for practical purposes, best describe as physical reactions.

A. *Behavioral Changes.* Of these we can of course readily recognize gross reactions such as delirium, confusion, "queer" ideas, hallucinations, agitated depression or euphoria. Of more concern are the less dramatic reactions which, if recognized, can enable us to prevent either a psychosis, a crippling neurosis or even emotional reactions that may adversely affect the physical illness already present. Among the more common behavior changes of this type, I shall mention three.

First is *withdrawal,* manifested by declining interest in daily routine, reduced communicativeness and emotional warmth, apathy, rumination, irritability (with perhaps outbursts of temper) and the appearance of moody resignation. Because these various forms can presage rather grave reactions, they need prompt attention. By all means, do not encourage family members to try to "snap him out of it" or increase their efforts at hearty cheerfulness. This is the time for the *physician* to act. He should see the patient alone, tell him what he has observed and elict from him whatever explanations he can. Lectures are out of place. We must find out what motivates the reaction. If he is unable to achieve results, the doctor should arrange a psychiatric consultation.

Second, *passive-aggressive reactions* can play havoc with members of the patient's family, and often have even worse immediate effects on them than on the patient, though in time he too will suffer from them. In this instance we find the patient exploiting his dependency needs to dominate and control the family. But he exploits in a deceptive way. He doesn't yell or give orders. On the contrary, he may encourage his family not to worry, not to curtail their activities and not to wait upon him. However, it will soon be apparent that what he asks of them is furthest from his real desire. His tone of voice, his subsequent reactions and the guilt he inspires in those who follow his urgings begin to betray his unconsciously-motivated aggressive drives. Usually, one member of the family is convinced of his sincerity and becomes his agent in criticizing the others—always reminding them of the patient's self-sacrificing considerateness. Often the patient finds ways of "taking the fun out of" the very things he urges the others to do. Thus, in many devious ways, the "helpless" one rules the lives of those about him.

Problems of this type develop insidiously and can be forestalled only by the early institution of healthy, objective values and attitudes for all members of the family. If the doctor's intervention produces distress in the patient, then at least he can treat the patient and save the family. Where the difficulty has flourished for some time, it may be necessary for the physician to assemble members of the family, describe the situation, explain what is happening and help them to new patterns of adjustment in their relations with the "sick" member.

Third, *disregard of illness* or treating illness lightly may be a healthy sign, but only if at the same time the patient is cooperative with the program of therapy. Beware of the patient who listens patiently to your advice and proceeds to ignore it. The uncooperativeness may be obvious or easily discovered, but it can be more difficult to detect,

as in the patient who tries in little ways to defeat the program. Such an individual alters the dosage of medications or frequently forgets to take them. He manipulates things so as to avoid prescribed activities and, at the same time, undertakes prohibited ones. Here again, we must search for motives and not be content with merely reprimanding the patient. In one case, there may be an unconscious need to deny the fact of illness. In another, albeit unconsciously, the patient may be acting out his protests against his dependency. In more serious cases, his own death-wishes are turned inward and drive him to defeat the doctor's efforts to get him well. In general, we must look beyond the uncooperative behavior to seek the different kinds of motivations which produce it.

B. *Organic Symptoms.* These constitute the varied disorders which are expressed primarily in somatic reactions.

First, there are the *prolonged symptoms without confirmatory physical signs.* Most diseases have "natural histories." That is to say, they run a roughly predictable course. Even in many chronic conditions, we can expect certain patterns of physiologic change which will be reflected in both laboratory studies and physical examination. When such studies are conducted at regular intervals, we are helped in evaluating the symptoms of a particular patient against the background of objective data. When these are at variance, and when the symptoms are greatly out of proportion to the signs, we must suspect the presence of psychologic factors and undertake to discover the reasons for the patient's anxiety. In some instances, they are fairly close to the surface and stem from real fears or misunderstandings. More frequently, however, the patient is unaware of the causes, and psychiatric treatment will be indicated. The physician will do well to lay the cards on the table gently but firmly, at the same time encouraging the patient to examine his own reactions and feelings. Often this procedure will suffice to define the problem and will enable the patient to attempt meeting it with more nearly adequate technics.

Second, there is *delayed healing.* Not infrequently, we are perplexed by cases which, though perhaps they get no worse, fail to improve despite our best efforts and despite seeming cooperation from the patient. All the right things are being done, but the tissue response is inadequate. When such a state has continued for some time, one is well advised to have a psychiatric examination. Although such cases may be relatively rare, we would not want to miss them. With proper diagnostic technics, we may discover underlying depression which not only has robbed the patient of his "will to live," but is profoundly upsetting his physiologic functions. The depth of such depressions is not obvious in the gross appearance of the patient, and what sombreness we note gives little clue to the magnitude of the disturbance which even the patient may not recognize. A patient's listlessness, his loss of interest in his own progress and in things about him, and his failure to progress medically in the absence of physiologic complications are warning signs which we must recognize.

Third is the appearance of *new symptoms.* All complaints of patients should of course be explored and diagnosed. When we find new ones which we cannot explain in terms of the primary disease or complications thereof, we must again suspect psychogenic factors. Not infrequently, it will be found that these new symptoms are not new at all. They were familiar to the patient before the present illness and are now returning as he recovers. Thus, a predilection for headaches, an ease of fatigue or gastrointestinal complaints which are fairly frequent before the present illness and which may have largely disappeared during the course of such illness, now reappear for no apparent reason.

In some of these situations, the patient may be reacting to the implications of getting well. Two general problems confront such patients: (1) the stress of returning to more active routines (with a fear of relapse, or a self-consciousness about limitations in his abilities), and (2) the abandonment of his dependency upon his family. Because, to one degree or another, every patient struggles with one or both of those problems, it is essential to prepare each individual for getting well, just as it was necessary to prepare him to face his illness. Preventive measures are preferable to those which deal with emerging neurotic reactions, and I have already cited the general principles involved.

SUMMARY AND CONCLUSION

Illness or injury constitutes a psychobiologic stress. Chronic disease of any kind requires readjustment of the total organism to itself, to the disease and to the on-going environmental situation. If we are to understand the psychobiology of disease, we must know the past history, both social and medical, of each individual, and in addition, we must have active awareness of the patient's family and of his occupational and recreational assets and liabilities. The physician cannot do all of the things demanded by the situation, but his skill in personal relationships with the patient and with the family, plus his use of the services provided by physical and occupational therapists, vocational rehabilitation personnel, psychologists and psychiatrists can provide the best possible demonstration of medical practice in the modern manner.

BIBLIOGRAPHY

1. Brennan, Margaret, and Gill, Merton M.: Hypnotherapy: A Survey of the Literature With Appended Case Reports and an Experimental Study. The Menninger Foundation Monograph Series No. 5. New York, Internat. Univ. Press, 1947.

2. Korzybski, Alfred: Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics. With Supplementary Introduction and Bibliography. New York, Science Press Publishing Company, 1941.

3. Ruesch, Jurgen, Harris, Robert E., and others: Chronic

Disease and Psychological Invalidism: A Psychosomatic Study. With a Foreword by Karl M. Bowman. Psychosomatic Medicine Monographs. New York, Psychosom. Med., 1946.
4. Dunbar, Flanders: Mind and Body: Psychosomatic Medicine. New York, Random, 1947.
5. Finesinger, J. E.: Effect of pleasant and unpleasant ideas on respiration in psychoneurotic patients. Arch. Neurol. & Psychiat., 42:425-490, (Sept.) 1939.
6. Finesinger, J. E.: Symposium: minor psychiatric disturbances in war and civilian life; psychiatric components in medical disease; psychosomatic medicine. New England J. Med., 227:578-584, (Oct. 15) 1942.
7. Frampton, Merle E., and Rowell, Hugh Grant: Education of the Handicapped. Volume II: Problems. Yonkers-on-the-Hudson, World Bk. Co., 1940.
8. Plant, J. S.: Personality and the Cultural Pattern. London and Oxford, The Commonwealth Fund, 1937.
9. Weiss, Edward, and English, O. Spurgeon: Psychosomatic Medicine: The Clinical Application of Psychopathology to General Medical Problems. Philadelphia, Saunders, 1943.

State University of Iowa College of Medicine

Clinical Pathologic Conference

February 16, 1955

SUMMARY OF CLINICAL FINDINGS

The patient to be considered was a seven-week-old male infant, admitted to the Department of Pediatrics with the symptom of vomiting.

He was the seventh child born to the family. The siblings, whose ages varied from five to 18 years, were stated to be healthy. The mother had had no difficulty with the pregnancy, the labor was uncomplicated and the immediate neonatal period was free of signs suggesting disease. The birth weight was 7 lbs. 7 oz. After breast feeding the infant for two weeks, the mother thought her supply of milk was inadequate and started an evaporated milk feeding. The formula, consisting of 6 oz. evaporated milk, 16 oz. water and 2½ oz. Karo, was well accepted, the mother stated.

During the fourth week of the infant's life, his father had an illness that was thought to be "flu." At that time, the infant started to cough and to vomit. The vomiting was not necessarily related to periods of coughing. The coughing disappeared in a matter of a few days, but the vomiting progressed in frequency and severity. Two days prior to admission, his vomiting had become so severe as to suggest that he was retaining none of his feedings. During the days immediately prior to admission, the vomiting was described as projectile and occurred immediately after each feeding. The infant retained a good appetite, but the stools decreased in number. There was no record of frequency of urination.

On admission to this hospital, the patient was described as having the appearance of dehydration. He was listless, and his skin was dry. The anterior fontanel was slightly depressed, and there were dark circles around his eyes. His body temperature was 98°F., his respiratory rate was 40 per minute, and his pulse rate was 120 per minute. There were no signs of respiratory tract infection, and the neck was supple.

The hemogram revealed 13.5 Gm. hemoglobin per 100 ml., a white cell count of 11,900 per cu. mm., and a differential of 36 segmented polys, 2 basophils, 60 lymphocytes and 2 monocytes. The urinalysis (taken after fluids were started) tested 4+ glucose, with a trace of acetone. When a few ounces of oral feeding were given, gastric peristalsis appeared, and the baby vomited. On deep palpation, a small mass was discovered in the right epigastric area.

Oral feedings were discontinued, and a program of intravenous alimentation was anticipated. For the purpose of correcting the child's dehydration, 200 ml. of fluid, composed of 1/3 normal saline and 2/3 of 5 per cent glucose was given at the rate of 60 ml. per minute. Because, after that volume of fluid, the patient had not urinated, another 200 ml. of a similar solution was given, and while receiving this, the patient urinated. For the purpose of establishing electrolyte equilibrium, 600 ml. of a fluid composed of 2/5 Darrow's solution and 3/5 of 5 per cent glucose was started.

By the morning of the second hospital day, the patient gave the clinical impression of having been hydrated. His general appearance was much improved. It was decided to give fluids during that day to provide the infant's electrolyte needs and some of his caloric needs, and 900 ml. of fluid composed of 3/5 Darrow's solution and 2/5 of 6 per cent glucose was given at the rate of 5-6 drops per minute. Added to that fluid was 1 ml. of a multi-vitamin preparation. During the day, two small oral feedings of 5 per cent glucose were offered, but the infant immediately vomited them.

At midnight of the second hospital day, the infant's fever suddenly rose to 103.4°F. It was recorded that he had several bouts of cyanosis and that his respiration became rapid. The physician on call thought the child might have an aspiration pneumonia, and he accordingly placed him in an incubator and started intramuscular penicillin therapy.

By 8:00 a.m. on the third hospital day, the infant was critically ill. His fever was 101.8°F. There was mottling of the extremities, and no peripheral pulses were palpable. It was the clinical impression that his blood clotting time was prolonged,

and 5 mg. of hykinone was given him intravenously. An upright roentgenogram was reported as showing distention of the stomach, without evidence of gas in the large or small bowel. The lungs were clear. An effort was made to draw blood for laboratory studies, but because of the peripheral vascular collapse, it was technically impossible.

A nor-epinephrine solution was started, and the infant's blood pressure was carefully followed. Although the following blood pressure readings showed systolic pressures of 100 to 120 mm. Hg., there was no change in his appearance. He was given 200 ml. of whole blood, and streptomycin and sulfadiazine therapy was started.

During the latter part of the third hospital day, the patient became unresponsive. Another roentgenogram was taken, and it was interpreted as showing that there was a complete obstruction of the outlet of the stomach. The patient's temperature had fallen throughout the day, and was 97.8°F. The cyanosis and mottling present on the distal portions of the extremities in the morning gradually extended to include all of the extremities and other parts of the body. No change in the patient's appearance followed the intravenous administration of 10 ml. of adrenal cortical extract.

The patient died on the afternoon of the third hospital day, having demonstrated no signs to suggest a response to the heroic therapy administered during the terminal day of his illness.

CLINICAL DISCUSSION

Dr. John C. MacQueen, Pediatrics: The first two paragraphs of the protocol have related a classic history of the infant with pyloric stenosis. The patient was a male infant, and the onset of symptoms occurred during the fourth week of his life. The vomiting frequently occurred immediately after a feeding, and was described as projectile. He continued to have a good appetite. His stools decreased in volume. We next have a classical description of the dehydrated infant—listlessness, dry skin, depressed fontanel and dark circles around the eyes. This history and the clinical appearance of the patient would suggest the presumptive diagnosis of pyloric stenosis. When that diagnosis is entertained, a trial of oral feeding is made, as has been described in the protocol. The test was positive, for it gave the appearance of ping pong balls being drawn from left to right under the skin of the epigastrium. The clinical diagnosis was confirmed by the palpation of a mass in the right epigastrium.

The next portion of the protocol describes an acceptable technic for treating an infant who has vomited because of pyloric stenosis, but whose plasma electrolytes have not been examined in the laboratory. Such infants are known to have deficiencies in water, chloride and potassium. For parenteral therapy, fluids are selected that contain adequate amounts of the needed factors and that are so composed that they allow the renal mechanism to reestablish water and electrolyte equilibrium. The first step in this form of therapy is directed towards reestablishing hydration and replacing the chloride loss. It is done by means of a solution the volume of which is composed of 1/3 normal saline and of 2/3 five per cent glucose. The next step is to insure the patient's electrolyte needs and replace his potassium loss, by means of a solution whose volume consists of 2/5 Darrow's solution and 3/5 five per cent glucose. The infant's response to this therapy was favorable. By the second hospital day, he had no clinical signs of dehydration. It was decided that the period of parenteral therapy should be continued, for it is our experience that an additional 24 hours spent providing this form of therapy gives the infant greater stability at the time of surgery and reduces the possibility of postoperative complications.

The latter part of the protocol outlines the infant's complications on the night of the second hospital day. To explain the sudden rise in his fever, a presumptive diagnosis of respiration pneumonia was entertained, and therapy which included incubator care and intramuscular penicillin was started. The clinical impression that the blood clotting time was prolonged arose from our observation of the bleeding from the vena puncture sites. Because of peripheral vascular collapse, it was impossible for us to obtain blood for the laboratory examinations that we needed very much if we were to understand the case. A solution of nor-epinephrine was started by intravenous infusion, and the clinical response has been recorded.

The important clinical picture, which should be described as unique in this child's illness, was a cyanosis and a mottling of the extremities. During the first part of his illness, this discoloration was restricted to the distal parts of his extremities, but during the latter hours of his life, it progressed toward and onto the main part of his body. In spite of the heroic efforts at therapy, including nor-epinephrine and adrenal cortical extract, the patient died.

Dr. Emory D. Warner, Pathology: At the time of death, which occurred fairly soon after the onset of the change in clinical picture to which Dr. MacQueen has just referred, this child had what would fit into the category of the Waterhouse-Friderichsen syndrome. There was extensive hemorrhage, with disruption of the adrenals bilaterally. There was generalized purpura, and there were multiple small areas of interstitial hemorrhage in the viscera. Most conspicuous were the hemorrhages in the skin and adrenals. There was hypertrophy of the pyloric sphincter, so that it was described grossly as olive-like and more

conspicuous than normal, and it appeared grossly that the stomach was slightly hypertrophied. The size of the pyloric sphincter was rather less conspicuous than in the average case of pyloric stenosis, but it definitely was large and thick.

From the various places, cultures were taken, but no meningococci could be found. Proteus morganii was cultured from the blood, from pleural fluid, from meninges, from lung and from the left middle ear. I might say that there was a little clear fluid in the serous cavities. This was not extensive, the tissues impressing the prosector as being somewhat dryer than normal, rather than edematous.

Grossly, the adrenals were just masses of hemorrhage. And not all of the mottling of the skin was blotching; there was actual hemorrhage in the skin. A section of adrenal gland that we examined under a low-power microscope showed that the panenchyma was greatly distended with blood and badly disrupted.

There were rather extensive focal necroses in the liver.

The lungs showed congestion, with dilatation of capillaries in the alveolar walls, some collapse of lung alveoli and some actual hemorrage in the air spaces of the lungs, but there was no inflammatory reaction.

Microscopically, one can demonstrate a few vascular lesions of the type described in the skin of the adrenals in such cases, but they are rather inconspicuous. Typically, there is supposed to be a fairly high incidence of platelet thrombi with areas of necrosis of the tiny vessels and capillaries, particularly in such areas as the purpuric lesions in the skin. In this case, there were a few disrupted capillaries, with some swollen endothelial cells, but vascular lesions were rather inconspicuous, and thrombi were not found in any of the hemorrhagic lesions.

SUMMARY OF NECROPSY FINDINGS

Necropsy findings were those commonly designated as Waterhouse-Friderichsen syndrome. There was extensive necrosis of the adrenal glands, with massive adrenal hemorrhage, generalized purpura, focal necrosis of the liver and visceral congestion. There was extensive pulmonary collapse, but no significant pneumonia. No evidence of meningococcemia was found. Proteus morganii was cultured from the blood, pleural fluid, meninges, lung and left middle ear. There was some clear fluid in the serous cavities, but the tissues in general appeared slightly dehydrated, rather than edematous. There was mild hypertrophy of the stomach, and the pyloric ring was thickened. The hypertrophy of the pylorus was less conspicuous than is usual in patients with classical symptoms of hypertrophic pyloric stenosis.

Death was thought to be the result of septicemia and adrenal insufficiency. The infecting organism probably was Proteus morganii.

NECROPSY DIAGNOSES

Proteus morganii septicemia

Waterhouse-Friderichsen syndrome, with hemorrhagic necrosis of adrenal glands

Focal necrosis of liver

Acute congestion with interstitial hemorrhages, spleen, kidneys and testes

Atelectasis and capillary congestion of lungs, especially the left

Hypertrophic pyloric stenosis, mild

Hypospadias, mild

Dr. John R. Carter, Pathology: Were any of the skin lesions cultured?

Dr. Warner: The skin lesions were not cultured.

Dr. H. Russell Meyers, Neurosurgery: What would be the pathogensis of this area of liver necrosis?

Dr. Warner: We see focal hepatic necrosis with all sorts of toxemias. A case with a septicemia of any type is likely to have focal necroses like these in the liver. They are quite non-specific.

Dr. Meyers: But my question had to do with the pathogenesis. I should like to know what dynamic sequence of events produces this necrosis.

Dr. Warner: The exact mechanism by which cell metabolism is stopped is unknown.

Dr. MacQueen: It is apparent that a major part of the discussion of this case should concern the bacteriological problem. Dr. McKee will present his findings.

Dr. Albert P. McKee, Bacteriology: There are a great many questions about this case that I would like to answer, but can't. Certainly the circumstances surrounding it are such as to suggest that one should look hard for a meningococcus. We did look hard, but we didn't find it.

When one draws spinal fluid from a case of meningococcic meningitis or blood from a case of meningococcemia *and inoculates media right away,* he usually succeeds in culturing the organism. What is the hurry? This organism produces an autolytic enzyme which functions rapidly. If one allows a culture or a spinal fluid containing the organism to stand, even under suboptimal conditions, it is not uncommon for autolysis to proceed at a rapid rate.

A meningococcus may not even have been a part of this picture. But even if it were, I insist that it is not easy to isolate such an organism unless all circumstances are ideal. We *did* culture Proteus morganii from this patient, and not from just a single site, or just from the blood. The organism obviously was distributed through the patient. It was found in the blood, in the pleural fluid, in the meninges, in the lung and in the left middle ear. Is Proteus morganii ordinarily one of the more powerful pathogens? No, it is not. Ordinarily we culture it from more benign types

of infection, such as chronic otorrhea, chronic wound infections and other pyogenic processes.

What is known about this organism as a pathogen in its own right? Not very much. It has been given extensive experimental study aimed at discovering how pathogenic it might be. However, as nearly as we can determine, it belongs to the group of Proteus organisms which are known to possess endotoxins more powerful than those which we find in E. coli. The dose of Proteus that is fatal to experimental animals is less than would be required of the garden variety of bacteria to be found in the gut—namely, E. coli or paracolon organisms.

I think that it is well to note at this point that as a group these Gram-negative rods do possess endotoxins. They are not exotoxin producers. Exotoxins secreted by the cell are extremely powerful and are excellent antigens. Endotoxins are not liberated unless the cells break down. They are fairly poisonous, but they are relatively poor antigens. The latter sort of antigens have been isolated from various members of this Gram-negative rod group, and are composed of a carbohydrate-lipid-protein complex. The carbohydrate portion is responsible for inducing a rather good antibody, and it is the combining of this antibody with the carbohydrate antigen that permits us to diagnose the organism rather readily. However, the antibody directed against the protein or poisonous portion of this moiety is a poor one, or at least it doesn't contribute much toward neutralizing it.

If the Proteus is the responsible organism in this case—and certainly it was widely distributed among the tissues—how can it have been lysed? I should like to cite an analogy that may help. Drs. Jeter and Bennett, in our Department, did some immunization work with Salmonella typhosa. They thought that, rather than kill the organisms with chemicals such as acetone or alcohol, they would add antibiotics. They used a combination of penicillin, streptomycin and sulfadiazine, and they allowed it to act on the vaccine overnight. It did the job. They noticed, in examining the vaccine to see whether any foreign organisms were present, that most of the cells had lysed. They centrifuged down the remaining cells and used the supernatant fluid for immunization. That material killed their experimental animals promptly. Then they went back to find out which, if any one, of the antibiotics had sponsored the lysis, and found that it was the penicillin, and only the penicillin. Streptomycin and sulfadiazine didn't accomplish it. Whether the penicillin given in this case just happened to accomplish a lysis of this organism, I can't say. Usually the quantity of penicillin necessary to lyse the Gram-negative rods is relatively high—such as 500 to 1,000 units per milliliter. Whether all strains require that much penicillin, I can't answer.

I should like to bring up one other point that may have a bearing on this case. We undertook an experiment in an attempt to discover the procedure for securing a subsequent immunity to pneumonia in experimental animals such as mice. If after a few MLD's have been given to mice, penicillin is withheld for any considerable length of time, the mice die. If one gives the penicillin just in time to save their lives, one is unable subsequently to demonstrate an immune response. But it had been thought that if a relatively large dose of pneumomococci were given them, and then if penicillin were administered in time to save their lives, there would be enough antigens left around to stimulate the immune process.

But in our hands it didn't seem to make any difference at what time we gave the penicillin to these highly susceptible animals. It seemed to hasten their deaths, for they died sooner than the controls.

Perhaps the liberation of endotoxin was responsible for our disappointing results. Perhaps not. We could not prove it in that instance. But the idea is worth considering that if, for any reason, a great quantity of endotoxin is released quickly in a non-immune individual, difficulty can be anticipated.

I am perfectly aware that I have not solved this case. But I have tried to bring up some situations that may have a bearing upon it.

Dr. William B. Bean, Medicine: Dr. McKee, do you imply that the Waterhouse-Friderichsen syndrome has to be caused by a meningococci?

Dr. McKee: No, I certainly don't. But as I hunt through the literature, I have a very hard time finding that anyone has done one experiment that obviously ought to be done: one to show that some of the other endotoxins could cause it. With the meningococcus it has been done experimentally, with rabbits and organisms that have been lysed. The same syndrome apparently can be produced with an effect on the adrenals similar to what we see in this case. I cannot answer your question about the particular Gram-negative rod involved in this child's illness, but I should not be surprised if it were unable to produce such an effect.

Dr. Bean: Clinically, certainly, it is not in any sense confined to meningococci.

Dr. McKee: Quite right. It so happens that the strains of meningococci that produced the best experimental Waterhouse-Friderichsen effect are the same ones that work best in the Schwartzman phenomenon. I don't want to enter upon a long dissertation about the Schwartzman phenomenon, for it is one about which we could theorize all afternoon and get nowhere. But I call your attention to the fact that this Gram-negative rod group which I talked about gives an excellent performance in the Schwartzman phenomena.

Whether these two are tied up, I can't honestly say.

Dr. MacQueen: Nor-epinephrine, a relatively new drug in our armamentarium, was used in the treatment of this child. Dr. Featherstone will discuss that material and its use.

Dr. Robert M. Featherstone, Pharmacology: Because my acquaintance with the case under discussion is limited entirely to what has been reported in the protocol, I can comment only in general terms on nor-epinephrine, a drug which is also called levarterenol or levophed. Chemically, the compound is epinephrine without the methyl group on the nitrogen, and it seems to be a uniquely good means of maintaining blood pressure in a patient. There seems to be less complication with the heart than there is when epinephrine is used. We do not get the tachycardia that one gets with epinephrine, and, therefore, there is better filling of the heart and an increased peripheral resistance, which was one of the goals sought here. Levarterenol is a good agent, and it has been used in some cases to maintain a healthy blood pressure for weeks at a time, simply through a constant administration of the drug. The contraindications for levophed have not been firmly established, primarily because there has not been sufficient experience with it. About the only comment that we should like to make is that in general, one should not give levarterenol to a patient to whom he wouldn't give epinephrine, but one does not have to be so careful as he is with epinephrine. In other words, where there is a cardiac complication, hyperthyroidism, or a similar contraindication for epinephrine, the use of levarterenol probably will present less of a problem. However, there is as yet no definite statement about these contraindications. From my very limited acquaintance with the case under consideration, I should say that levarterenol was an excellent choice of means for maintaining blood pressure in the patient.

Dr. Bean: How did it happen that the pharmacologists overlooked this drug for so long?

Dr. Featherstone: There is a very good reason why it was overlooked. There is about 17 per cent of levarterenol in the epinephrine that you people have been using for a good many years. It was not until the coming of chromatography that levarterenol was discovered, and when once it had been purified and separated from the epinephrine, its pharmacology was studied and it was found to have this beneficial action. I might add that in the past year or two we have come to think that it is the levarterenol liberated at the sympathetic nerve endings which plays a role in the transmission of impulses. In cases of pheochromocytoma, it is now recognized that at those nerve ends there are 90 parts of levarterenol to 10 of epinephrine, whereas in the adrenal gland itself this proportion may be reversed. There we find about 85 to 90 per cent epinephrine.

Dr. Samuel J. Fomon, Pediatrics: Is there such a thing as D nor-epinephrine, as well as L nor-epinephrine?

Dr. Featherstone: Yes. The compound that is used clinically, I believe, is entirely the L molecule. There is an interesting difference between the efficiencies of the D and the L forms. In the case of epinephrine, the L form is 20 times as potent as the D form. In the case of levarterenol, the L form is 45 times as potent as the D form. So there is an L and a D form in each case.

Student: Is nor-epinephrine effective in shock? Is it more effective than epinephrine?

Dr. Featherstone: If epinephrine is effective—though I think you would find considerable doubt about that—one would expect nor-epinephrine to be even better, for it does have the property of increasing peripheral resistance.

Dr. MacQueen: The major research project being carried out by members of the Pediatrics Department is that of Drs. May and Gauchat. They are evaluating the long-term response of adrenalectomized monkeys. Dr. Gauchat, from your experience with adrenal functions in monkeys, what have you to add to this discussion?

Dr. Robert D. Gauchat, Pediatrics: There is one question that I should like to raise. I don't think that we should assume that the 10 cc. of adrenal cortical extract which was given as a "heroic measure" in this case could have been anything but a token dose. Standard preparations of this drug contain activity on the order of 0.1 mg. of cortisone per ml. and 0.03 mg. per ml. of desoxycorticosterone.[1] So if 10 cc. were given, the patient received 1.0 mg. of cortisone and 0.3 mg. of DOCA, quantities which are scarcely heroic. If adrenal replacement therapy appeared indicated, 100 cc. of adrenal cortical extract might well have been used safely, and perhaps would have been more beneficial. Other than that, I have no comment to make.

Dr. Warner: How long will a monkey live after bilateral adrenalectomy and without hormone replacement?

Dr. Gauchat: Our present answer to that question would be 786 days, for that is the postoperative period of our oldest surviving monkey. At the present time, we seem to be losing monkeys at 200 days post-adrenalectomy. Of 13 monkeys on whom we operated in July, 1954, eight survive, and none of them have had continuous hormone therapy. Some of them have had intermittent treatment of that sort, in most cases during crises which follow anorexic periods when they don't take their fluids and salt as well as they do when they are eating normally.

---

1. Thorn, G. W., Forsham, P. H., Frawley, T. F., Wilson, D. L., Renold, A. E., Fredrickson, D. S., and Jenkins, D.: Advances in the diagnosis and treatment of adrenal insufficiency. Am. J. Med., **10**:595-611, (May) 1951.

Dr. Warner: Without any hormonal replacement, there is a discrepancy between the rapidity with which these patients die and the absence of the adrenal consequent to adrenalectomy. Is that correct?

Dr. Gauchat: Are you still talking about the monkeys, or are you talking about patients?

Dr. Warner: I am talking about patients as you might compare them with the monkeys.

Dr. Gauchat: We have had no deaths in the immediate postoperative period following bilateral adrenalectomy. For the first 36 hours after adrenalectomy we give cortisone, DOCA and adrenalin to our monkeys, but only for 36 hours, at which point they are usually able to be up and about, and are ready to begin eating again. From there on, they are maintained on additional salt in their liquid formula, but no more hormones are given them unless they collapse. But I do not believe that our adrenalectomized monkeys should be considered analagous to patients with the so-called Waterhouse-Friderichsen syndrome of meningococcemia and acute adrenal cortical hemorrhage.

Dr. Warner: The statement is often made that deaths among these patients occur too fast to be explainable on the basis of the adrenal destruction *per se.*

Dr. Gauchat: I believe that one would be correct in going along with this group. Certainly, if it were entirely an adrenal problem, they should be able to survive for many days. Maintenance of adequate blood pressure is not a particular problem for the adrenalectomized subject, unless dehydration is also present. Initially, anyway, dehydration is not often present in the Waterhouse-Friderichsen syndrome.

Dr. Bean: Do you and Dr. May conclude from these observations that in the monkey the adrenal is present merely for stuffing?

Dr. Gauchat: The original title of our project was "Adaptation to Adrenalectomy in the Rhesus Monkey." We have now revised our thinking considerably. We do believe that it may be possible for it to adapt as far as salt metabolism is concerned. Postoperatively, our monkeys have been consistently hypoglycemic, with blood sugars in the range from 30 to 50 mg. per cent, and sometimes much lower than that. We have never demonstrated any adaptation so far as carbohydrate metabolism is concerned. The purpose of our study initially was to prepare a laboratory model closely resembling man in known physiologic mechanisms, so that we could study its behavior when the adrenals were absent. We still hope to do so. We are still struggling to get a satisfactory regimen of supportive care which will provide a stable basic state from which to proceed. There are many difficulties involved.

Dr. Meyers: To what extent do you think that the relative success of the monkey in dealing with adrenalectomy is due to the distribution of adrenal tissue in aberrant sites such as the pelvic viscera, brain, etc.?

Dr. Gauchat: We have successfully removed the adrenals bilaterally in one stage. We have never found adrenal tissue in any animals by gross postmortem examination. We have not examined serial microscopic sections at postmortem, but we have followed our animals with frequent blood sugar determinations, electrolyte determinations, urinary 17-ketosteroid determinations, and uric acid and creatinine measurements. We believe that the data we have obtained demonstrate the lack of functional adrenal tissue. The animals are hypoglycemic. They require enormous amounts of salt—in the range of ten to twenty times the maintenance requirements of human children. They excrete very small amounts of urinary 17-ketosteroids. All of these indications, we think, are good clinical evidence for the absence of functional adrenal tissue.

Dr. James E. Odell, Pediatrics: I should like to address my remarks primarily to Dr. Warner. I know that the heart can be divorced from the peripheral vascular system only in our thinking. But was there anything, either grossly or microscopically, that might lead one to suspect that the heart *per se* had any part in the demise of this particular patient?

Dr. Warner: Microscopically, the myocardium looked quite normal. There certainly was no evident degenerative change in the myocardium, and it wasn't appreciably dilated or soft and flabby. In the ordinary type of examination, the heart, grossly and microscopically, did not show any lesions.

Dr. Bean: Experimental animals on a diet deficient in pantothenic acid may die of hemorrhagic apoplexy of the adrenals. After that apoplexy, the animal goes into shock and perishes in a way that has some analogies to what we may be permitted, somewhat loosely, to call the Waterhouse-Friderichsen syndrome. We have recently finished some studies using a diet devoid of pantothenic acid and a metabolic antagonist in human subjects, and we have induced evidences of a state like Addison's disease and trouble with acetylization, among other changes. Our people were all subject to very frequent infections during the depletion period. It is known that experimental animals do not make antibodies appropriately when they are on a pantothenic-acid deficiency. In a clinical trial from the other direction, we gave large doses of pantothenic acid to Addison's disease patients and to people with overwhelming sepsis who, we thought, might have hemorrhage into the adrenals. In no instance did it seem to do any good whatever.

Dr. Gauchat: I should like to ask whether the glucose solutions used were cultured for possible contamination with Proteus morganii.

Dr. MacQueen: No.

Dr. Henry E. Hamilton, Medicine: I should like to ask Dr. Warner whether there was evidence of retention of large amounts of fluid in the stomach.

Dr. Warner: No.

Dr. Charles H. Read, Jr., Pediatrics: Because of the presence of peripheral vascular collapse and the frequent finding at autopsy of hemorrhage in the adrenal cortex, it has been assumed that the patient with Waterhouse-Friderichsen syndrome has an acute adrenal cortical insufficiency. However I am unaware of any studies on such patients which demonstrate the typical laboratory findings of such insufficiency. Dr. Robert Kline has reported that the serum corticoids of such patients are high, rather than low. I would therefore like to ask if anyone has any data which clearly demonstrate the presence of adrenal insufficiency.

On the other hand, I do not believe it correct to say that the symptoms observed in this syndrome can't be due to adrenal cortical insufficiency merely because they appear more rapidly than do symptoms of insufficiency following adrenalectomy. Patients with Waterhouse-Friderichsen syndrome are undergoing an acute stress, a state which is known greatly to increase the body's requirements for cortical hormones. Under these circumstances, deprivation of a continued supply of cortical hormones would quickly result in symptoms of insufficiency. In contrast, the adrenalectomized individual who is not undergoing significant stress would not have so great a requirement for adrenal hormones, and thus would not develop deficiency symptoms so rapidly.

Dr. MacQueen: Dr. Gauchat, from your reading could you answer Dr. Read's first question concerning the importance of acute hemorrhage or hemorrhage into the adrenals?

Dr. Gauchat: I don't know of any other studies relating to hormone levels. In the usual clinical report, the patient is said to have died "in spite of therapy." Uhl[2] has reported a classic case of the Waterhouse-Friderichsen syndrome in which intravenous nor-epinephrine was effective in treating vascular collapse over a 60-hour period. During treatment, fairly comprehensive studies of adrenocortical function were done, and they indicated no adrenocortical failure, either during the acute stage or after recovery. If I recall the paper correctly, the patient responded to nor-epinephrine, but not to parenteral adrenocortical replacement therapy. Uhl's findings are in agreement with Dr. May's[3] impression that the primary problem in these cases is medical shock secondary to overwhelming sepsis, and that maintenance of blood pressure without overloading a toxically weakened heart is the main therapeutic goal.

Dr. Jack M. Layton, Pathology: I wonder whether Dr. Warner would care to comment on the hemorrhage which we see in the adrenals in the stage of reorganization of the cortex.

Dr. Warner: Every once in a while in the newborn infant, we see hemorrhage in the adrenals associated with the reorganization of cortical tissue. When such infants die, death is assumed to have been the result of disruption of adrenal function. Some people have thought that by means of administering adrenal substance such infants might be retrieved from what was rapidly developing into fatal collapse. I personally am not familiar with any chemical studies on actual steroids to back up the thesis that there is adrenal insufficiency in any of those cases. I think there is reason for some skepticism as to how much of this rapidly developing collapse is incident to the hemorrhage into the adrenal and how much of it is a part of the larger picture of which the adrenal hemorrhage is itself a part.

Dr. MacQueen: In review, I may say that this six-weeks-old infant was admitted to this hospital with the signs and symptoms of pyloric stenosis. Complications arose that were caused by an overwhelming sepsis. Proteus morganii was the organism that was identified from the cultures taken. Clinically, there was a Waterhouse-Friderichsen-like state, and the child died in spite of therapy.

2. Uhl, H. S. M.: Nor-epinephrine in the treatment of acute meningococcemia with shock (Waterhouse-Friderichsen syndrome) and an evaluation of adrenocortical function. New England J. Med., **249**:229-232, (Aug. 6) 1953.

3. May, C. D., and Gauchat, R. D.: Management of acute severe illness in infancy and childhood. J. Iowa M. Soc., **43**:146-148, (Mar.) 1953.

PUBLIC RELATIONS MEETING

Mr. T. A. Hendricks, secretary of the AMA Council on Medical Service, is to be the featured speaker at the Annual Medical Public Relations Meeting of the Adams County (Illinois) Medical Society, at the Lincoln-Douglas Hotel in Quincy, on Monday evening May 9, 1955. Mr. Hendricks served for 20 years as executive secretary of the Indiana State Medical Society and is well qualified to talk on the public relations phases of AMA activity. Physicians, dentists, pharmacists, nurses, medical auxiliary members, technicians, and medical and dental secretaries and assistants are being invited. A complimentary buffet will be served at the close of the meeting.

The Swanberg Medical Foundation, at Quincy, has begun publication of a monthly newsletter, the QUINCY (ILL.) MEDICAL PR NEWS, which is designed to publicize programs and technics for maintaining and improving the public's understanding of doctors' services. The Foundation is an irrevocable trust set up by Dr. Harold Swanberg for the Adams County Society. The newsletter will be mailed to all members of that Society and to other doctors who express their interest in it.

Editorials

DO WE FACE A SHORTAGE OF PHYSICIANS?

In view of the criticism sometimes levelled at the medical profession that it restricts the number of physicians to be trained, it is interesting to read comments made by Dr. Leonard W. Larson* at the recent national conference on rural health. The following paragraphs are taken from the conclusion of his address:

". . . Great progress has been made during the past decade in producing an adequate number of well-trained doctors. This rate must be maintained, but there are serious problems facing our medical schools today. Foremost is the alarming decrease in the number of qualified applicants seeking admission to our medical schools. The records show that there were roughly 15,000 different individuals applying for entrance in 1953-1954, compared with about 25,000 in 1949-1950. To put it another way, there were only two applicants for each place a year ago compared with 3.5 applicants five years ago. It is recognized, of course, that there were an abnormally large number of GI's trying to enter medical and other professional schools during the late forties. But the picture has changed, and the deans of our medical schools are gravely concerned over the relatively small number of qualified boys and girls who are applying for admission to their schools. One state university, which was forced to increase the size of its freshman class 25 per cent by legislative action, had only 1.1 qualified applicants for each place in the freshman class. We all agree that there must be a steady flow of medical graduates each year to maintain a proper physician-population ratio, but we have a right to demand that they be equipped mentally and physically to give their patients the best standard of medical practice. If the number of applicants for admission to our medical schools decreases to the point where the entrance requirements are either lowered or disregarded in order to fill quotas, the quality of medical education will surely suffer. What are the reasons for this decrease in the number of our young people who desire to become doctors? There are at least three:

"First, economic opportunity is greater in other fields. Pre-medical freshman and sophomore students in our colleges are being told by their classmates that it is foolish to spend 10 or 12 years preparing for a medical career, plus two years of military service. They are being tempted to switch to engineering, chemistry or physics and wind up four years of college with a couple of years of military service and a job at $350 to $400 a month in these fields at the outset.

"Second, medicine has lost its number-one spot as a glamour subject to atomic energy. Our teenagers are intrigued over the prospect of harnessing atomic energy through chemical, physical and engineering means. This challenge overshadows medicine as a career, and bright young students are turning away from medicine in increasing numbers toward chemistry, physics and engineering.

"Third, our youth is being adversely affected by the series of derogatory articles that have appeared in the public press during recent years and the everlasting hammering of some political leaders against the medical profession. Physicians are pictured as money grabbers with little or no interest in the welfare of patients. Why enter a profession that has lost its soul? Why assume the burden of the long work-week and strains on the emotions if the practice of medicine is just a business devoid of the traditional idealistic appeal of taking care of the sick? These writers and politicians who seem to take keen delight in berating the medical profession are drying up the supply of physicians at the source. Do they honestly believe what they say, or is the remuneration or political advantage their primary concern? . . .

"You who are in attendance at this conference, can, individually or through the organizations you represent, do much to correct the impression which prevails in many quarters that it is nigh unto impossible for qualified boys and girls to gain admission to our medical schools. There is no vital shortage of doctors today; the shortage is in the number of our youth who wish to enter the profession of medicine. Unless the tide changes, there will be a shortage of doctors in the future. You can help stem that tide."

* Dr. Larson is a member of the Board of Trustees of the American Medical Association.

WORK SIMPLIFICATION FOR CARDIAC HOUSEWIVES

At the end of the first week in April, some 78 county tuberculosis and health association chapters had budgeted funds to send a resources person to the workshop on the problems of cardiac housewives to be held in Ames, June 14-16. Registrations have been slow in coming in, however, and the Iowa Tuberculosis and Health Association would welcome the assistance of physicians in stressing the advantages of this workshop.

To state it briefly, registration is limited to nurses and home economists who, it is felt, can

return to their communities and educate handicapped women in ways of attaining better family living. The program is designed to show methods of work simplification that will enable the cardiac housewife to carry on some of her household duties without placing undue strain upon her heart. The information will also be helpful to persons with other sorts of physical handicaps.

Nearly every physician has among his patients certain individuals who must conserve their energies. But very few of them have the time or knowledge to tell those people specifically how to simplify their chores so as not to be physically embarrassed. The workshop will give training in that sort of counseling to people who already have background education of types that fit them to give such advice.

Here is an instance in which the physician can secure some valuable help merely by letting it be known that he needs and wants help.

THE END OF THE RAINBOW

In the December, 1954, issue of MINNESOTA MEDICINE, a guest editorial written by a dealer in securities[1] proclaimed that by paying $500 per month, over 12 consecutive years, for the shares of an investment company, one can provide oneself with a subsequent monthly income of $500 without using up one's principal. The implication was left with the reader that those payments to him would continue in perpetuity.

Now that pronouncement, if it were quite reliable, would herald the discovery of Utopia. But without taking time for more than one truism—that all which glitters is not gold—we are impelled to interpose a few *if's* and *but's*.

There are two principal types of investment companies, the "closed-end" and the "open-end."[2] The former are quite like other corporations, except that instead of manufacturing or transporting something, mining a natural resource, or selling goods at wholesale or at retail, they are engaged solely in investing and reinvesting their funds in the stocks and bonds of corporations that do engage in those productive activities. The stocks of "closed-end" companies are listed and are sold and resold on one or more of the major stock exchanges. If panic were to hit the exchanges, the price of stock in a "closed-end" company would fall, though no faster—and in all probability more slowly—than the stocks of the companies whose shares it was holding. In any event, since frightened stockholders would be left to get their money from whatever other individuals they could persuade to buy them out, the "closed-end" company would be under no obligation to liquidate its holdings, and it might very well continue paying respectable dividends throughout the ensuing depression.

But it is the "open-end" companies that are identified with such annuities to end all annuities as that to which MINNESOTA MEDICINE's guest editorial writer was referring, and they are institutions of a somewhat different sort. They are engaged in much the same sort of activity—investing and reinvesting money in the stocks and bonds of industrial firms and governmental entities. But they maintain their own sales forces to sell their shares, and they undertake, themselves, to redeem those shares whenever a shareholder wishes them to do so, and to pay out whatever is, at the moment, the shareholder's proportionate part of the assets of the company. Some of them offer plans that parallel insurance schemes for assuring the completion of a contract purchase of a home—plans under which a part of each amount that the purchaser sends to them pays a steadily decreasing premium on a policy to take care of the remaining payments in the event of the shareholder's death, and, presumably, to provide his widow $500 per month, or whatever, starting immediately. Engel has reported, however, that the federal Securities and Exchange Commission does not permit the "open-end" companies to advertise either that plan or any of their other ones.[3]

Now it is undeniable that the "open-end" companies, along with the "closed-end" ones, have done very well indeed in the almost constantly rising stock market that has persisted since 1935 or 1936. But there are very few of them that were in existence during 1929 and 1930, and for that reason it has never been thoroughly proved that they can survive a calamity such as occurred then. Indeed, there is considerable basis for thinking that they might not.

If a panic were to befall us and if there were a "run" for money, the "open-end" companies, pledged as they are to redeem shares on demand and to pay amounts equal to the shareholders' proportionate parts of their total assets, would have to dispose suddenly of thousands and thousands of shares of industrial, public utility, mining, railroad and other types of stock at whatever they would bring. The very fact that they were forced to sell such quantities so suddenly would considerably accelerate the collapse in market prices. And there would be very little percentage in a shareholder's resolving to ride out the storm, for his company probably would have vanished before stock prices generally had recovered.

Having promised to indulge in no more than one platitude, we have nothing more to say on the subject.

---

1. Schaps, N. V. (of J. M. Dain & Company, Investment Securities): Why this lively interest in common stocks? Minnesota Med., 37:891-892, (Dec.) 1954.
2. Sauvain, H. C.: "Investment Companies and Their Policies." In his: Investment Management. New York, Prentice-Hall, 1953, pp. 415-422.
3. Engel, L.: "Mutual Funds." In his: How to Buy Stocks: A Guide to Successful Investing. Boston, Little, Brown and Company, 1953, pp. 196-207.

on all 4 count

AC





wide spectrum of effectiveness
rapid diffusion
prompt control of infection
minimum side effects

he decision often favors

ROMYCIN*

HYDROCHLORIDE
TETRACYCLINE HCl *LEDERLE*

Compared with certain other antibiotics, ACHROMYCIN offers a broader spectrum of effectiveness, more rapid diffusion for quicker control of infection, and the distinct advantage of being well tolerated by the great majority of patients, young and old alike.

Within one year of the day it was offered to the medical profession, ACHROMYCIN had proved effective against a wide variety of infections caused by Gram-negative and Gram-positive bacteria, rickettsiae, and certain viruses and protozoa.

With each passing week, acceptance of ACHROMYCIN is still growing. ACHROMYCIN, in its many forms, has won recognition as a most effective therapeutic agent.

Lederle

LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U. S. PAT. OFF.

IAGP IS GROWING

It would appear that things are looking up for the general practitioners. The Iowa chapter of the AAGP was second-place winner in a new-member contest this year, and it has just initiated a new service to its members, an attractive monthly bulletin entitled HAWKEYE GP NEWS.

At the national level, the AAGP is now furnishing a news release series which is calculated to draw attention to items of interest to the lay public which have appeared in GP and other medical publications. And an article by Paul de Kruif which appeared in a recent issue of READER'S DIGEST has attracted considerable attention and has flooded the organization's headquarters in Kansas City with letters and long-distance telephone calls requesting information regarding family doctors for individual citizens. It appears that the general public has a deep and sincere desire for family doctors, for few of the inquiries appeared to come from neurotics.

We congratulate the general practitioners on the good work that they are doing in raising the standards of medical practice, in sponsoring and attending symposia, and in working toward the improvement of public relations for the medical profession.

NORMAL RED BLOOD CELL COUNT

Because in medical school we were taught that the normal red blood cell count was about 5,000,000, we were for a long time in the habit of thinking of 4.5 to 5.0 as the normal range for women and 5.0 to 5.5 as normal for men. In recent years, however, we have found erythrocyte counts so uniformly below those figures that we have wondered whether our patients as a group were becoming anemic. In our experience, a red blood cell count of 5,000,000 in a woman has become increasingly rare, and the average has seemed to go below 4,500,000. In order to check on our impressions, we made inquiry of the hematology departments at a well known clinic and at a university medical school.

Reports from both places have tended to substantiate our findings. The doctors at the clinic say say that they have seldom seen an erythrocyte count over 4.5 in women, and as a rule, they think that normal varies from 4,000,000 to 4,500,000 in women, and 4,250,000 to 5,000,000 in men. A count in excess of 5,000,000, they say, is now quite rare in either male or female.

The professors at the medical school agree in no longer expecting a red blood count in women of over 4.5 and in regarding counts between 4.0 and 4.5 as normal. They state that both their hemoglobin and red cell counts run a little below the standard that is given in textbooks and that usually has been accepted. In tests given to many classes of prospective nurses, they report finding a surprisingly large number of low hemoglobin and red cell counts. In some cases, administration of iron has seemed to produce sustained improvement, but in others it has produced no more than a temporary increase in hemoglobin. They have been unable to find a satisfactory explanation for those phenomena, and have come to the conclusions that the commonly accepted standards have been too high and that there is a group of women whose hemoglobin is congenitally low and cannot be elevated by any of the methods available today.

One possible explanation, however, seems to have been overlooked by both the clinic and the school—the dietary one. It is altogether possible

VARIATIONS IN MINERAL CONTENT IN VEGETABLES*

	Percentage of Dry Weight		*Millequivalents Per 100 Grams Dry Weight*				*Trace Elements Parts Per Million Dry Matter*				
	TOTAL ASH OR MINERAL MATTER	PHOSPHOROUS	CALCIUM	MAGNESIUM	POTASSIUM	SODIUM	BORON	MANGANESE	IRON	COPPER	COBALT
SNAP BEANS											
highest	10.45	0.36	40.5	60.0	99.7	8.6	73	60	227	69	0.26
lowest	4.04	0.22	15.5	14.8	29.1	0.0	10	2	10	3	0.00
CABBAGE											
highest	10.38	0.38	60.0	43.6	148.3	20.4	42	13	94	48	0.15
lowest	6.12	0.18	17.5	15.6	53.7	0.8	7	2	20	0.4	0.00
LETTUCE											
highest	24.48	0.43	71.0	49.3	176.5	12.2	37	169	516	60	0.19
lowest	7.01	0.22	16.0	13.1	53.7	0.0	6	1	9	3	0.00
TOMATOES											
highest	14.20	0.35	23.0	59.2	148.3	6.5	36	68	1938	53	0.63
lowest	6.07	0.16	4.5	4.5	58.8	0.0	5	1	1	0	0.00
SPINACH											
highest	28.56	0.52	96.0	203.9	257.0	69.5	88	117	1584	32	0.25
lowest	12.38	0.27	47.5	46.9	84.6	0.8	12	1	19	0.5	0.20

* (Firman E. Bear Report, Rutgers Univ.)

These findings explain why the daily dietary, no matter how well planned, cannot be depended upon generally to furnish adequate amounts of nutrients necessary for optimum nutrition and well being.

that some individuals, at least, haven't been getting trace amounts of minerals in the amounts that are supposed to be contained in well-balanced meals, not because they don't eat the "right" things, but because the "right" things, sometimes at least, fall short of containing what they should. The following chart shows how greatly some vegetables vary in mineral content.

The gradual depletion of minerals in our soils seems an unlikely explanation, for ours is a comparatively new country, but newly introduced methods of forcing crops or poor methods of storing them may account for some of the variations in mineral content, and the matter deserves careful explanation. When alfalfa of a particular strain or from a particular field fails to produce satisfactory growth, milk productivity or other desirable characteristics in farm animals, something is done about it. There is even greater reason for making sure that vegetables intended for human consumption will accomplish what is expected of them.

We hope that these suggestions may be thought provoking. We shall continue to look to our medical centers for research that will keep us abreast of changing standards.

QUESTIONNAIRE ON INDUSTRIAL HEALTH

The Committee on Industrial Health has been working for two years on a manual of directives for the nurse in industry, a booklet that is now ready to go to the printer. At the same time, it has considered holding a series of regional meetings to establish a closer alliance among employers, industrial nurses and physicians doing some industrial medicine. The Committee on Rehabilitation hopes to cooperate in conducting these regional meetings, for it believes that many physicians and employers would welcome additional knowledge regarding rehabilitation procedures and regarding the desirability, both psychologic and physiologic, of getting workers back on the job as soon as possible.

In order to get some idea of the number of physicians in Iowa who are doing industrial medicine, a questionnaire was sent to every doctor on March 17. Those who were not interested in the subject and did no such work were asked to check the questionnaire to that effect and return it. To date, 498 physicians have made that response.

When one considers that those doctors were kind enough to go through the letter and the questionnaire, and then pay the postage on the return envelope, one feels very appreciative of the conscientiousness of his Iowa colleagues. Over 20 per cent of the membership, though they were themselves uninterested in the particular subject, were sufficiently aware of the importance of the matter to the Society as a whole that they made the return. That is a splendid record, and one for which the Committee is most grateful.

To date, 454 physicians doing some amount of industrial medicine have returned their questionnaires, answering the questions more or less in detail. Some have added pertinent comments that will aid the Committee. Conditions vary greatly. Some areas in the state have very little industry, but none is without farming accidents and hazards.

Many physicians in both categories asked that copies of the summary be sent to them. That will be done, and in addition the Committee hopes to prepare a summary for a forthcoming issue of the JOURNAL.

Committee members, most of whom come from distant points in the state, feel well repaid for their efforts by the splendid response to the questionnaire. They also feel impelled to thank the many physicians who cooperated in making this questionnaire a successful means of compiling needed information.

CIVILIAN CARE FOR ARMY PERSONNEL

Recognizing that there are many areas and situations in which soldiers may need civilian medical attention, the Department of the Army has worked out a system for buying such care. Commissioned officers, warrant officers, enlisted personnel and cadets of the United States Military Academy are eligible when they are on travel or leave status, as well as on duty. Prisoners are also entitled to such attention at federal expense, but personnel absent without leave, of course, are not.

The Army undertakes to pay for civilian medical care only when no military or other federal medical facilities are available, except that first aid or other care which must be given on the spot is authorized anywhere and at any time. Surgical operations should not be undertaken without the prior approval of the chief surgeon, Fifth Army, 1660 E. Hyde Parke Boulevard, Chicago, unless indicated as emergency procedures. Elective medical treatment will not be authorized.

Medical care of dependents of military personnel by private practitioners will *not* be paid for by the government.

When an emergency case has been treated without prior authorization, notification should immediately be sent *both* to the soldier's commanding officer and to the Fifth Army surgeon. The information given should include the patient's name, organization and military address, and statements concerning the nature of his illness or injury and regarding the practicability of transferring him to an Army or other governmental hospital.

Bills for medical care and treatment of Army personnel should be submitted to the commanding officer of the patient's organization, or to the military authority who approved it.

President's Page

As the new year approaches in Iowa State Medical Society business, I should like to ask that you keep two thoughts uppermost in your minds: first, that every member must follow the best medical practices and render the best medical service to the people of the state of Iowa; second, that every member, when called upon, should give his time and effort to help solve the many problems that face medical organizations from time to time. With these two objectives foremost in our thinking, we can promote good will for the medical profession and further the cause of organized medicine.

In selecting physicians to serve on committees, I have made a sincere effort to be fair and equitable, keeping in mind geographical representation, physician interest, etc. This year we asked county medical society secretaries to submit the names of physicians who might be willing to serve as officers or committee members in the Society. The response was good, but not 100 per cent. To maintain the continuity of activity of some of the committees, it was necessary in many cases for me to reappoint former committee members, even though their names had not been submitted by the secretaries of their county societies.

As your new president, I will do my very best to serve the medical profession in a manner which will bring respect to it, and I will keep in mind at all times that the medical profession's first obligation is to the people of the state.

L. R. Coffin, M.D.
President

Iowa Academy of General Practice

AAGP SCIENTIFIC ASSEMBLY

Under the able leadership of its dynamic president, William B. Hildebrand, M.D., the Seventh Annual Scientific Assembly of the American Academy of General Practice was held in Los Angeles, California, during the last week in March. The total registration was well in excess of 6,000 persons, of whom approximately 3,500 were physicians. The Iowa Chapter was well represented by 47 of its members, all of whom agreed as to the excellence of the whole meeting.

The Iowa Chapter Luncheon, at the Hotel Statler on March 30, proved to be a memorable gathering. We were honored by having the newly elected vice-president of AAGP, Malcolm E. Phelps, M.D., and his lovely wife as our guests. It was regrettable that, because the hotel required reservations, we were unable to expand sufficiently to accommodate all who wished to be present at that delightful occasion.

The many interested spectators who attended the business sessions of the House of Delegates found that much work is necessary to keep Academy standards high. There were many items of business considered and acted upon. Some of them were routine, but many promised to be very important to the organization in years to come. One of those that are of particular concern to the general membership was the raising of dues from $19.50 to $20.00, so that confusion resulting from the use of fractions of a dollar could be avoided. The general trend of thought throughout the meeting concerned increasing the standards of the Academy. Requirements for admission will be raised, effective January 1, 1956, so that, beyond internship, a prospective member must have either two years of graduate training, or one year of graduate training and two years of general practice experience, or three years of general practice experience. There is little doubt that by 1960 a residency will have been made a prerequisite to academy membership.

The State Officers Conference gives an opportunity for the officials of the various state chapters to get together and exchange ideas on problems confronting various ones of them. This year the theme was training programs directed toward causing the student to become interested in general practice and demonstrating to him the methods of carrying on such practice.

The Scientific Assembly was excellent throughout, and each session was very well attended. There were outstanding lectures and panel discussions. A review of the program as it appeared in GP will serve as a reminder of the subjects discussed, and any detail of the various lectures in this review is needless.

A highlight in any AAGP member's career will be his attendance at the annual Scientific Assembly to view the technical and scientific exhibits, as well as to listen to the program. The smoothness of operation of the whole assembly demonstrates the careful and thorough planning done under the direction of the able executive secretary, Mr. Mac F. Cahal.

HEART SYMPOSIUM

The Lederle program on heart disease, May 19, 1955, at Hotel Savery, Des Moines, is the Iowa chapter's next postgraduate course. Please watch your mail for your special invitation. There will be an enclosure for your wife. See that she gets it!

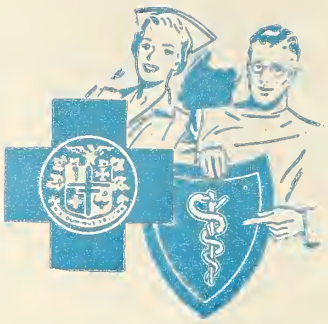
MEMBERSHIP AWARD

At the State Officers Conference, in Los Angeles, William M. Sproul, M.D., of Des Moines, chairman of the Commission on Membership and Credentials, presented awards to the three states that had the highest percentages of increase in membership. Kentucky was the first-place winner; Iowa was second; and Washington third. Iowa's ranking is significant, for it shows that our membership committee is very active and that our individual members are working to increase our numbers. We can get the first-place award next year if each member brings in at least one new member.

UNCLE WILFRED

Uncle Wilfred has invented a new cigarette holder which, though it has not yet received the endorsement of Alton Ochsner, promises to be a tremendous success. It includes a removable chamber through which the smoke passes on its way from the cigarette to the smoker's lungs. In the chamber he places a mouse. When the mouse develops cancer he takes it out, throws it away, and puts in a new one.—GP, March, 1955, p55.

BLUE CROSS



BLUE SHIELD

CLAIMS PAID BY TYPE OF SERVICE IOWA BLUE SHIELD IN 1954

Service	*Number of Services*	*Percent of Total*	*Total Paid*	*Percent of Total*
MATERNITY				
Miscellaneous	610	0.45	$21,260.00	0.51
Delivery	10,186	7.48	609,470.00	14.54
Caesarean section	484	0.35	48,285.00	1.15
Total	11,280	8.28	$679,015.00	16.20
SURGICAL				
Appendectomy	2,292	1.68	$228,386.32	5.45
Tonsillectomy	5,136	3.77	137,725.00	3.29
Herniotomy	1,513	1.11	160,540.00	3.83
Cholecystectomy	984	0.72	136,755.75	3.26
Hemorrhoidectomy	1,292	0.95	61,871.50	1.48
Hysterectomy	1,117	0.82	147,778.75	3.53
D & C	1,811	1.33	46,472.00	1.11
Lig., Saph. vein	453	0.33	40,011.50	0.95
Thyroidectomy	276	0.21	36,972.50	0.88
Cystoscopy	1,843	1.35	50,645.50	1.21
Prostatectomy	301	0.22	37,197.50	0.89
Benign breast tumor	856	0.63	33,537.00	0.80
Traumatic wounds	15,520	11.40	158,277.15	3.77
Fractures	4,903	3.60	230,287.55	5.49
Tumors	6,352	4.67	77,518.25	1.85
All other surgery	24,507	18.00	856,653.10	20.43
Total Surgery	69,156	50.79	$2,440,629.37	58.22
ANCILLARY BENEFITS				
Anesthesia	18,156	13.34	$232,278.23	5.54
X-ray—diagnostic	12,793	9.40	144,966.53	3.46
X-ray—Radium therapy	139	0.10	9,060.50	0.31
Medical Care—hospital	24,626	18.09	686,070.43	16.37
Total	55,714	40.93	$1,072,375.69	25.58
Total All Payments	136,150	100%	$4,192,020.06	100%

THE DOCTOR'S BUSINESS



Do You Need an Assistant?

GLENN C. KREAMER

WATERLOO

Because many doctors will soon complete their internships, this is the time of year for you to consider carefully whether or not you need an associate.

You may wonder how to determine your need. Ask yourself these questions: Am I satisfied with the money I am making? Am I working too hard for that money, even though I have an efficient office layout and proper equipment, and even though I have adequate and well-trained assistants and am delegating as much work as possible to them?

If your answers are "yes," then decide honestly whether you are temperamentally suited to working with and enjoying an associate day in and day out, realizing that in five to ten years he will be an equal partner.

Then take a good look at the future. You can expect to pay from $600 for a general practitioner to $1,000 per month for a specialist during the first year. Sometimes in the second year, if he is capable and industrious, an associate is put on a percentage basis to enable him to earn more money.

You should be prepared to earn a little less the first year, but if your associate fits well into your practice and into the community, your earnings should return to normal thereafter. A great deal will depend upon how much *you* "slow down."

It is not unusual for both doctors to be as busy as the senior of them was before the association. The rule of thumb is that during the first year the new man should bring in 20 per cent of the patients he sees, 40 per cent the second year, 60 per cent the third, 80 per cent the fourth, and after that he should be self-reliant.

SELECTION OF AN ASSOCIATE

Finally, consider the prospective partnership. Generally it is formed after one or two years of satisfactory association, and the junior doctor is gradually raised to the status of equal partner in five to seven years.

In your interview with each prospective associate, you and the applicant need to be very frank with one another. You will want to know as much as possible about each other's interests in medicine, methods of practice, philosophy of life, personality, hobbies, etc., and it is imperative that you have a clear understanding of the conditions under which you will work.

WORKING AGREEMENT

When you have chosen your man, your attorney should prepare a contract for you, based upon your desires. Following are the items which are usually included in a working agreement:

1. Length of time of association.
2. Sick-leave provisions (from one to three weeks per year, non-cumulative).
3. Vacations (two to four weeks yearly).
4. Expenses:
   a. Normally the employer pays for malpractice insurance.
   b. The associate usually provides his own car, but is paid a car allowance of $25 to $50 per month, dependent on the distances he needs to drive.
   c. The associate pays his own convention expenses, but the employer often pays his medical dues.
5. Salary (amount and/or method of remuneration).
6. Military Clause (If called into service, associate is assured of returning to the practice with the same benefits and standing that he enjoyed when he left).
7. Termination (Either party may end the agreement after 30 days' written notice. In that event, the younger man agrees not to practice in the county or trade area for a period of two years).

There are many advantages to an association and the resulting partnership. If you form it realistically and take every precaution to make it workable, yours may be among the very successful associations!

Mr. Kreamer is assistant manager of Professional Management.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ANTIBIOTICS AND ANTIBIOTIC THERAPY, by *Allen E. Hussar*, M.D., and *Howard L. Holley*, M.D. (New York, the Macmillan Company, 1954. $6.00).

FLUOROSCOPY IN DIAGNOSTIC ROENTGENOLOGY, by *Otto Deutschberger*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $22.00).

THE LUNG (Clinical Physiology and Pulmonary Function Tests), by *Julius H. Comroe, Jr.*, M.D., *William A. Briscoe*, M.D., and *Elizabeth Carlsen*, A.B. (Chicago, The Year Book Publishers, Inc., 1955. $5.50).

ION EXCHANGE AND ADSORPTION AGENTS IN MEDICINE (The Concept of Intestinal Bionomics), by *Gustav J. Martin*, Sc.D. (Boston, Little, Brown and Company, 1955. $7.50).

MODERN TREATMENT YEARBOOK 1955, 21st Edition, ed. by *Sir Cecil Wakeley*, Bt., K.B.E., CB. (London, Bailliere, Tindall & Cox, and Baltimore, The Williams & Wilkins Company, 1955. $6.00).

THE YEAR BOOK OF ORTHOPEDICS AND TRAUMATIC SURGERY (1954-1955 Year Book Series), ed. by *Edward L. Compere*, M.D. (Chicago, The Year Book Publishers, Inc., 1955. $6.00).

ANTIBIOTICS ANNUAL, 1954-1955, ed. by *Henry Welch*, Ph.D., and *Félix Martini-Ibáñez*, M.D. (New York, Medical Encyclopedia, Inc., 1955. $10.00).

BOOK REVIEWS

REVIEW OF MEDICAL MICROBIOLOGY, by *Ernest Jawetz*, M.D., Ph.D., and *Edward Adelberg*, Ph.D. (Los Altos, California, Lange Medical Publications, 1954. $4.50).

This book is the combined work of two bacteriologists and an epidemiologist. The first third of the 360-page text is devoted to fundamental principles of bacterial cytology, growth, metabolism and variations, and to a classification of bacteria. Several chapters are devoted to a discussion of bacterial agents, chemotherapy, antigens and antibiotics, and host-parasite relationships. Basic data are presented precisely, and there is little superfluous material.

An outline form is maintained, and important points and subject headings are underlined. The black and white illustrations include many photomicrographs and a few schematic drawings. The text is easily read and is adequate for a general understanding of bacteria.

The second third of the volume, devoted to the common bacteria causing disease in man, is presented in outline form much like many standard texts in bacteriology. Current information is included.

In the last portion of the book, there is an excellent section on viruses, a general outline of the most recent information in an increasingly important field. The sections on mycology and rickettsias are adequate, but not outstanding.

A few electron photomicrographs are included, and there are data about the clinical diagnosis and isolation of viruses. The review ends with a few pertinent remarks about bacteriophage and a short list of references.

The book is paper bound and is printed in small but readable type. The illustrations are not numerous, but are effectively placed. No laboratory technics have been included, for it is not meant to be a laboratory manual. No attempt is made to present controversial points about infectious agents, and the book is not meant for graduate students in the field. It is, however, an excellent up-to-date review of microbiology as it relates to medicine.—*F. C. Coleman*, M.D.

STANDARD VALUES IN NUTRITION AND METABOLISM, ed. by *Errett C. Albritton*. (Philadelphia, W. B. Saunders Company, 1954. ..).

Despite the fact that this monograph is the work of more than 800 specialists in various fields of nutrition and metabolism, despite the fact that the effort expended in preparing the 223 pages of tables and 16 pages of diagrams must have been stupendous, and despite the fact that the material presented is probably as accurate as scientific data can be, this reviewer can see little practical use for the book.

It is a coldly presented volume of tables on nutrients used by animals and human beings and of nutrient allowances of all types of animals from man to fish. It includes the composition of cultural media and fertilizers, tables of pathways of metabolism, data on oxygen consumption, data on energy exchange, and other figures. The tables are difficult to read and more difficult to interpret.

Although it may be true that somewhere, somehow, someone may be interested in the composition of the diet of the hyena, the mineral composition of the rutabaga, or the function of nitrogen in the thiobacillus, it is likely that he can be found only among research specialists at the universities or, perhaps, among scientific dietitians. The practicing physician will have no use for this book.—*Daniel A. Glomset*, M.D.

AN OUTLINE OF THE TREATMENT OF FRACTURES, by the Committee on Trauma. Fifth Edition, revised and amplified. (Chicago, American College of Surgeons, 1954. $1.00).

EARLY CARE OF ACUTE SOFT TISSUE INJURIES, by the Committee on Trauma. First Edition. (Chicago, American College of Surgeons, 1954. $1.00).

The first of these manuals represents the judgment of the Committee on Trauma of the American College of Surgeons on safe treatment of fractures. General principles are enumerated, with excellent illustrations to clarify the methods of treatment. Fracture aphorisms are appended, and they are as helpful as they always have been. The student as well as the practitioner who occasionally is called upon to treat fractures will do well to follow these principles.

Similarly, the manual on soft tissue injury serves as a guide for any physician in proper methods of treatment which have been developed through the combined experience of many years of effort. These monographs point the way to better care for all types of wounds.—*E. M. George*, M.D.

Urology, by *Meredith Campbell,* M.D. and 51 collaborators. Three volumes. (Philadelphia, W. B. Saunders Company, 1954. $60.00).

This is a comprehensive set of books, containing monographs by 51 contributing authors. Surgery, pathology, anatomy, internal medicine, pediatrics, radiology, gynecology, anesthesiology and zoology, as well as urology, are represented. The collaborators are men of renown in their respective fields and topics. More than any book or set of books by a single author could do, this set brings the subject comprehensively up to date. And the differences in the manners of writing add interest. Each section is a complete monograph, and most of them are accompanied by good bibliographies.

There is emphasis on the relationships of the basic sciences to clinical practice throughout the sections. Preoperative and postoperative care are well covered. The section on urologic surgery is well written, is quite complete and is accompanied by good illustrations.

There is more stress on the import of the medical aspects of urology than is to be found in the majority of urologic texts. Good discussions on nephritis, medical diseases of the kidney, endocrinology and adrenal problems are included. Radiation therapy in relation to the genitourinary system is ably and concisely presented.

The volumes offer much material that cannot be obtained elsewhere. No urologist's library will be complete without them as a source of reference and review. The resident in urology will find them invaluable. The general practitioner, internist, pediatrician and student can refer to the set as a valuable source of information, and all of them can read it profitably. —*E. T. Burke,* M.D.

The Year Book of Drug Therapy (1954-1955 Year Book Series), ed. by *Harry Beckman,* M.D. (Chicago, The Year Book Publishers, Inc., 1955. $6.00).

Most practicing physicians are well acquainted with the excellence of the Year Book Series. To those who have not become acquainted with Dr. Beckman's handling of the drug-therapy volumes, one can only suggest that they have been missing something. His editorial comments on the key articles that are abstracted in the volume are priceless gems of perspicacity and humor. One can only wish that more of them had been included.

This year, the emphasis is on several fields of therapeutic endeavor—particularly cardiovascular disease, tuberculosis, infectious disease, arthropathies and malaria. In each of the five or six hundred abstracts, the material is presented from an unbiased viewpoint, and a surprising amount of definitive material is included. If Dr. Beckman has formed a strong attitude concerning a given article, he is likely to have expressed it in an editorial comment.

The edition is of particular value to busy practitioners who haven't time to cull the literature. The abstracts are brief and express different opinions on a given subject. The book is also of value for those who wish to give talks or write papers on therapeutic subjects, for background material and references are made accessible to them in it. If only we could be granted sufficient time to peruse the entire volume, all of us would be better doctors.—*Daniel A. Glomset,* M.D.

A Textbook of Physiology, by *John F. Fulton,* M.D., 17th Edition. (Philadelphia, W. B. Saunders Company, 1955. $13.50).

Dr. Fulton, with the aid of his collaborators, has done it again. The 17th edition of this volume, prepared five years after the last one, has been generously revised. Many chapters, including those on the physiology of the nerves and impulse conduction, body fluids and kidneys have been brought up to date. The problem of energy transformation in nerve cells has been added.

Altogether, this textbook is a masterly presentation of the modern concepts of physiology. It is easy to read and is generously interspersed with illustrations. The bibliographies appended to the chapters are quite adequate. Medical students and all practitioners of medicine will do well to include this volume in their libraries.—*E. M. George,* M.D.

Lectures on General Pathology, by *Sir Howard Florey.* (London, W. B. Saunders Company, 1954. $13.00).

Sir Howard Florey is a professor at the Sir William Dunn School of Pathology at Oxford University, England. Nine other authors, most of them teachers at the same institution, contributed to this book, although Dr. Florey wrote several of the chapters and edited the remainder. The text consists of lectures in pathology given to medical students, and the illustrations consist of black and white photographs of good quality.

The author states that no attempt has been made to cover the entire field of general pathology, and there are no sections devoted to specific organs. Emphasis is placed on pathologic physiology. Antigens, antibodies and immunity reactions, the pathogenesis and virulence of microorganisms, inflammation and reaction to injury are discussed in detail. Irradiation injury, fever and reactions to viruses are discussed in short, well written lectures. In general, the bibliographies at the ends of the chapters are too brief to satisfy advanced students in pathology. The style of writing varies from chapter to chapter, but it is usually clear and concise.

These lectures contain more information than is to be found in most general texts in pathology. The book should be valuable to the sophomore medical student in pathology and should also be of help as a guide to the lecturer on pathology at the undergraduate level. —*F. C. Coleman,* M.D.

ANESTHESIOLOGY EXHIBIT

The Hall of Medicine at the Chicago Museum of Science and Industry has been enlarged to accommodate a 3,000-square-foot exhibit entitled "The Conquest of Pain: The Story of Anesthesia," financed by Abbott Laboratories and prepared by the American Society of Anesthesiologists, in cooperation with the Department of Medical Illustration of the University of Illinois College of Medicine and the Museum's staff.

The exhibit shows how the increasing ability to control pain and sustain life plays a major part in today's spectacular operating room accomplishments. It also shows that surgery is no longer something to be feared.

MENTAL ILLNESS

PSYCHIATRIC EMERGENCIES

Any mental illness that poses an immediate, genuine threat to the life or welfare of the patient or those about him constitutes a psychiatric emergency. When one attempts to categorize reactions of most serious importance, the first group one usually thinks of consists of suicidal tendencies. However at least two other groups must be considered: stuporous manifestations and excitability.

THE SUICIDAL PATIENT

Public Health statistics reveal that suicide is the tenth cause of death nationally, and the sixth cause of death in the age period 15 through 24 years. Suicide occurs most often in people who are suffering from depression, but may occur in schizophrenia, toxic-organic states, panic states, neuroses and situations with a subtler psychopathology—for example in the careless motorist or in the uncooperative medical patient.

Warning signals should be watched for. All patients who are more than mildly depressed should be suspects. The fact that a patient talks of suicide cannot be taken as reassurance that he won't kill himself. But, on the other hand, the vast majority of patients who speak of suicide, or think of it, don't make any genuine attempts. Threats must be taken seriously until proved otherwise. Reassurance and moral and ethical appeals often will avert a suicidal inclination. Increase of tension or anxiety in a depressed patient is a bad sign.

The frankly suicidal patient is best handled in a closed ward, which often is available only in a psychiatric hospital. If home management is necessary for any length of time, someone must have his eye on the patient every minute of the 24 hours. Suicidal intent is often not volunteered by the patient and must be elicited by the doctor. The patient should not have access to rooms in which he can lock himself, and harmful instruments and agents should be kept away from him. The seriously suicidal patient can be extremely ingenious in the method he chooses. When the patient is in a position of optimum security, then appropriate treatment is directed toward the etiology of the suicidal impulse.

THE EXCITED PATIENT

Excitement, over-activity and belligerence are encountered in a number of psychiatric disorders, namely in mania, in toxic states, in schizophrenia, in post-traumatic and occasionally in postoperative reactions. The essence of treatment is the prevention of exhaustion and dehydration, and the maintenance of nutrition. Those objectives can best be accomplished either in a psychiatric or in a general hospital. All unnecessary stimuli should be excluded. Intermittent sedation is employed in the form of paraldehyde or the new tranquilizing agents such as Thorazine and Serpasil. One should avoid the use of barbiturates and morphine, for they may enhance excitement. Constant sedation usually is unnecessary. The maintenance of nutrition and hydration is effected through gavage or intravenous feedings. Hydrotherapy (cold, wet packs) are no longer frequently employed. They are contraindicated in alcoholic psychoses, in organic brain syndromes and in the presence of cardiovascular disease. Excessive restraint only fans the fire of excitement, and the patient is better maintained in a room affording some freedom of activity, without opportunity for his harming himself or others. The excitement in acute manic and schizophrenic reactions responds well to electrotherapy, which often is given several times daily. Physicians and attendants must help to interpret the patient's environment for him and give him repeated reassurance about his safety and return to well-being.

THE STUPOROUS PATIENT

In psychiatry, stupor does not necessarily denote a disturbance in consciousness, or a coma. Patients who exhibit extreme motor retardation—for example those exhibiting depression or profound withdrawal, and the catatonic schizophrenics—are said to be in a stupor. They may refuse food and medications, and either retain urine and feces or become incontinent. They maintain fixed positions for long periods of time, creating problems peculiar to the immobilized patient. When a patient is depressed enough to be stuporous, the suicide risk is negligible. However, catatonic patients may become alternately stuporous and excited. Care of them is directed toward maintaining hydration and nutrition by tube and intravenous feedings, as in the excited patient. Stimulant drugs like benzedrine or combinations of sodium amytal and benzedrine, used intravenously, are useful in increasing motility and appetite. Even profoundly stuporous patients may drink 1,500 cc. of a gastric feeding, after receiving 7½ grains of sodium amytal and 20 mg. of benzedrine sulphate intravenously. Prolonged retention of urine or feces can be handled by catheterization or enemas. Fortunately, the kind of patients described above responds quickly and very satisfactorily to electrotherapy, and early treatment by this method is urged.

The suggestion might well be advanced here that every hospital should be equipped for electrotherapy under psychiatric direction.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

TUBERCULOSIS FOLLOW-UP

The following instructions regarding the care of tuberculosis patients who have returned from the Oakdale Sanitorium to their homes is being given to all public health nurses in Iowa.

Dr. W. M. Spear, superintendent of the Sanitorium, has assisted in the preparation of these instructions. It is understood that medications, instructions and time schedules for re-check will necessarily vary somewhat from patient to patient, as well as from hospital to hospital. But the public health nurse will profit from having in her possession a basic set of follow-up instructions.

DRUG THERAPY

The use of antibiotics has shortened the hospitalization for tuberculosis patients. When a patient has received a medical discharge from Oakdale, drug therapy may be prescribed for continued treatment, and if so, his personal physician receives a detailed report from the Sanitorium regarding it.

In preparation for his medical discharge from Oakdale, the patient is given an opportunity, at a small fee, to purchase a metal syringe holder with needles and also the necessary streptomycin cartridges. Sufficient streptomycin and needles are given for use during the two months until the patient is due to return to Oakdale for his physical examination. Subsequent return visits are indicated by the medical staff.

The patient is instructed to report to his family physician twice a week for the streptomycin injections. The materials may be left at the physician's office.

Oral PAS or INH also may be prescribed. The usual dosage of PAS is 24 tablets per day, and of INH, 4-6 tablets per day. Definite instructions for the use of oral drugs are given the patient before he leaves the hospital.

If a situation arises in which the patient is unable to go to the physician's office, a public health nurse may be asked by the doctor to give the streptomycin. Or with the doctor's approval, it may be necessary for the public health nurse to instruct a nurse living in the community. It should be kept in mind that whenever possible the physician should administer the streptomycin, for his doing so has the double advantage of bringing the patient into the doctor's office and of permitting the doctor to observe his progress at first hand.

Patients who are AWOL from Oakdale are not equipped with the materials. Should they return there, they are charged a minimum fee for the physical examination, X-ray and drugs. Should the AWOL patient go to a physician for treatment and drugs, the charges made will be at the discretion of the physician.

Under the state system of bidding, Pfizer Laboratories has secured the contract for steraject streptomycin. The cartridge contains 2½ cc. (1 Gm.), an amount which does not clog the needle or give a burning sensation.

The above described procedure is followed and approved by Dr. W. M. Spear, medical director of the State Tuberculosis Hospital at Oakdale. In county tuberculosis hospitals, the medical directors have their own established procedures.

CAUTION: Streptomycin may be given by public health nurses ONLY upon the written order of the patient's physician. Such an order must be dated. Verbal orders are not acceptable.

TECHNICS IN ADMINISTERING STREPTOMYCIN

The public health nurse is to use the procedures for bag technic as indicated in the IOWA MANUAL FOR PUBLIC HEALTH NURSES, page 19, "C" 1, 2, 3, 4, 5.

1. Place the syringe and the box with needle and cartridge containing streptomycin on a paper towel or a newspaper.

2. Open the paper envelope one inch at the shank end of the needle. Screw the needle into the open end of the syringe. Keep the paper covering on the needle. The needles are 20 gauge, 1½ inch.

3. Hold the syringe in your right hand. Pull the plunger down with your left hand and push the barrel to the side.

4. Cleanse the rubber cap of the cartridge with 70 per cent denatured alcohol. Do not use Isopropyl alcohol or rubbing alcohol.

5. Insert the cartridge into the syringe.

6. Be sure that the cartridge is pushed up into the small needle which is visible at the upper end of the syringe. If the lower end of the cartridge is not flush with the syringe, the cartridge may break when the plunger is put back in place.

7. Push the plunger back over the barrel. This will lock the syringe.

8. Turn the plunger clockwise until it is screwed firmly into the metal tip at the end of the cartridge. Then turn back ¼ turn. Cleanse the area of injection with alcohol.

9. Remove the paper which covers the needle. Push the plunger slightly to force out the air.

10. With your first finger and thumb, give a slight pinch to raise the muscle. Inject into the muscle; withdraw the plunger to see that there is no blood. If there is none, push the plunger slowly. Alternate hips should be used for streptomycin injections.

11. Remove the needle, and rub the area with a cotton pledget.

REMOVING CARTRIDGE FROM SYRINGE

1. Turn the plunger counter-clockwise to release the cartridge. (This is important, for if it is not done correctly, the cartridge may break.)

2. Open the syringe. (Pull down on the plunger and tip the barrel to the side.)

3. Remove the empty cartridge and unscrew the needle. Both may be destroyed. Cleanse the syringe with alcohol each time it is used. If the cartridge is broken, cleanse the syringe with Soilex solution. Dry thoroughly to prevent rust.

NOTE: Patients treated with streptomycin should be observed carefully for allergic manifestations, dizziness and rise in temperature. When these are noted, the patient should see his physician as soon as possible.

MORBIDITY REPORT

Disease	*Mar. 1955*	*Feb. 1955*	*Mar. 1954*	*Most cases reported from these counties:*
Diphtheria	0	1	1	None
Scarlet Fever .	115	86	361	Des Moines, Louisa, Polk
Typhoid Fever	4	2	0	Decatur, Mitchell, 1 each; Lee 2
Smallpox	0	0	0	.....
Measles	1552	1116	1102	Des Moines, Linn, Polk, Scott
Whooping Cough	86	119	9	Henry, Polk, Scott
Brucellosis	9	10	13	Scattered, 1 to a county
Chickenpox ...	720	695	1140	Buena Vista, Linn, Polk, Pottawattamie, Scott
Meningococcus Meningitis ..	8	4	3	Clinton, Mitchell 1 each; Polk 4; Winneshiek 2
Mumps	1121	983	773	Black Hawk, Clinton, Polk, Pottawattamie
Poliomyelitis .	1	5	4	Linn
Infectious Hepatitis	164	193	483	Benton, Black Hawk, Linn
Tularemia	1	-	-	Dallas
Actinomycosis	1	-	-	Carroll
Rabies in Animals	13	15	23	Carroll, Woodbury 2 each; others scattered 1 to a county
Staphylococcus Aureus Food Intoxication	31	-	-	Des Moines
Tuberculosis ..	33	48	59	For State
Syphillis	78	85	129	For State
Gonorrhea	39	36	52	For State

Coming Meetings

In State

May 19	Heart Symposium, Iowa Academy of General Practice, Des Moines
Sept. 15-16	Annual Meeting, Iowa Academy of General Practice, Des Moines
Oct. 13-14	Joint Meeting, Mississippi Valley and Iowa Trudeau Societies, Des Moines

Out of State

May 2-13	Medicine, Cook Co. Grad. Sch. Med., Chicago
May 9-20	Dermatology, Cook Co. Grad. Sch. Med., Chicago
May 9	Public Relations Meeting, Lincoln-Douglas Hotel, Quincy, Ill. T. A. Hendricks of the AMA, speaker
May 16-27	Gastroenterology, Cook Co. Grad. Sch. Med., Chicago
May 16-June 6	Surgery, Cook Co. Grad. Sch. Med., Chicago
May 18-20	Am. Coll. of Cardiology, Hotel Biltmore, New York City
May 19-22	Seminar on Hypnosis, Chicago Sch. Med. & Dental Hypnosis
May 23-27	General Surgery, Cook Co. Grad. Sch. Med., Chicago
May 23-27	Radium Therapy, Cook Co. Grad. Sch. Med., Chicago
May 24-28	Surgery for general surgeons, Center for Continuation Study, Univ. of Minn., Minneapolis
June 6-10	Annual Meeting, American Medical Association, Atlantic City
June 6-July 1	Surgical technic, Cook Co. Grad. Sch. Med., Chicago
June 6-10	Thoracic surgery, Cook Co. Grad. Sch. Med., Chicago
June 6-10	Vaginal approach to pelvic surgery, Cook Co. Grad. Sch. Med., Chicago
June 13-24	Gynecology, Cook Co. Grad. Sch. Med., Chicago
June 13-17	Surgery of colon and rectum. Cook Co. Grad. Sch. Med., Chicago
June 13-17	Esophageal Surgery, Cook Co. Grad. Sch. Med., Chicago
June 13-17	Hematology, Cook Co. Grad. Sch., Chicago
June 13-24	Cerebral Palsy, Cook Co. Grad. Sch. Med., Chicago

WOMAN'S AUXILIARY NEWS

Mrs. Keith M. Chapler, *Publications Chairman,* Dexter, Iowa
President—Mrs. Lester R. Hegg, Rock Valley
President-Elect—Mrs. Charles H. Flynn, 709 W. 15th Street, Clarinda
Secretary—Mrs. Robert P. Mason, 5818 Chamberlain Drive, Des Moines 12
Treasurer—Mrs. Howard H. Smead, 3333 Grand Avenue, Des Moines 12

TEN COMMANDMENTS FOR DOCTORS' WIVES

G. Irene Polhemus, M.D.

1. Thou shalt not fail to minister to thy husband's comfort and physical well-being in the home.

2. Thou shalt not burden thy husband with thy problems and duties.

3. Thou shalt not create or maintain any emotional upheaval.

4. Thou shalt not expect thy husband to be a good businessman or a social butterfly.

5. Thou shalt not, either publicly or privately, disparage thy husband's medical ability or opinions.

6. Thou shalt not invade the privacy of thy husband's office during office hours.

7. Thou shalt not be jealous of thy husband, whether in regard to the time and energy required by his profession, other professional men, his office girl, the nurse at the hospital, or the fool woman who calls at his office more often than necessary.

8. Thou shalt not ask thy husband questions about his patients.

9. Thou shalt repeat nothing said to you by him on professional matters nor divulge any information inadvertently stumbled upon.

10. Thou shalt not handicap thy husband by failure to participate in the social, charitable and educational duties of the community.

—Hoosier doctor's wife, December, 1954

CIVIL DEFENSE

Today we are faced with an even greater task than we experienced during World War II because of such weapons as the atomic and hydrogen bombs.

Individual family and community preparedness must not only be continued but intensified. Effective mass public education now is the key to national survival. If war should come, adequate knowledge and training in what to do and how to do it will be our greatest assurance of survival. This knowledge will also aid us in a quick recovery from the initial shock of such an attack.

The most important points of a program of civil defense are:

1. Home protection exercises
2. Home nursing classes
3. Education in area sanitation
4. Education in mass feeding
5. Education in temporary housing problems
6. Cooperation with the medical profession in preparedness

It is a well known fact that emergency medical treatment is the foundation of a relief program.

Remember that Americans will need more effective civil defense if we are to brace our country against the shock of a possible attack that utilizes these modern weapons of war.

We must work together in our individual communities if we hope to survive this dreadful attack, should it come.

Join your local Civil Defense organization, and let's all work together.

THE HOOSIER DOCTOR'S WIFE,
December, 1954

NATIONAL CONVENTION

The thirty-second annual convention of the Woman's Auxiliary to the American Medical Association will be held in Atlantic City, New Jersey, June 6 to 10, 1955, at Hotel Haddon Hall. All reservations are handled through Dr. Robert Bradley, chairman, Sub-committee on Hotels, 16 Central Pier, Atlantic City, New Jersey.

Reservations should be made immediately.

"LET YOUR LIGHT SO SHINE"

If your Auxiliary has made a worthwhile contribution to the public common good in one form or another, have the best writer in your group compose the story and send it to the Central Office, where it will be submitted to the AMA for approval. And then, perhaps, it will be forwarded to Miss Christine Sadler, of Mc CALL's magazine for the new feature "Women's Club Notes From All Over."

COUNTY AUXILIARIES

Black Hawk

At a tea held at the Waterloo Woman's Club on February 26, the Black Hawk County Medical Auxiliary honored 250 girls representing the six Future Nurses clubs of the county. Special guests included Mrs. Lester R. Hegg, state president of the Auxiliary, the sponsors of the clubs and the superintendents of the hospitals in the county. Mrs. Herbert Shulman was chairman for the event, and Mrs. Eugene Smith and Mrs. Carl Hanson were her assistants.

A social meeting of the Black Hawk Auxiliary was held on March 15 in the home of Mrs. Howard Hartman. Plans for attending the state convention were discussed. It was decided to send a red carnation to the husband of each member on March 30, "Doctor's Day."

Grundy

At a meeting of the Grundy County Medical Auxiliary at the home of Mrs. H. L. Moe, in Grundy Center, on March 2, the following officers were elected: Mrs. H. V. Kahler, Reinbeck, president; Mrs. H. L. Moe, vice-president; and Mrs. W. O. McDowell, Grundy Center, secretary-treasurer.

Hamilton

The Hamilton County Medical Auxiliary met at the home of Mrs. George Paschal on March 18 and reelected the following officers: Mrs. J. L. Ptacek, president; Mrs. R. C. Crumpton, president-elect; Mrs. F. F. Hall, secretary-treasurer. The following members head key committees: Mrs. B. F. Howar, Nurse Recruitment; Mrs. O. C. Buxton, Public Relations and TODAY'S HEALTH; Mrs. E. F. Rambo, Legislation and History; Mrs. D. C. Anderson, BULLETIN; and Mrs. W. B. McGahey, Press and Publicity.

Mahaska

The Mahaska County Medical Auxiliary was organized on March 31, at the home of Mrs. Leroy F. Catterson, in Oskaloosa. The officers who were elected include Mrs. George Atkinson, president; Mrs. Catterson, vice-president; Mrs. E. M. Lemon, secretary; and Mrs. Robert Alberti, treasurer. The other charter members present were Mrs. Howard Bos, Mrs. Geoffrey F. Bennett, Mrs. Joseph Lederman, Mrs. Robert M. Collinson and Mrs. Sidney Smith. Guests from Wapello County were Mrs. Edward B. Hoeven, former state president; Mrs. C. Ray Phelps, co-chairman of the Ottumwa Future Nurses club; and Mrs. H. A. Spilman, co-councilor of District IX.

Tentative projects were discussed, and it was decided to hold the first meeting on a date corresponding with that of the Mahaska County Medical Society. A coffee and social hour preceded the election of officers.

Polk

The Polk County Medical Auxiliary held a benefit bridge and canasta party at Hoyt Sherman Place, in Des Moines on March 21. Following a dessert luncheon, a welcome to the members and their guests was given by the chapter president, Mrs. Herbert C. Merillat. All proceeds from the benefit will be used to further the Future Nurses Club program.

Palo Alto

The Palo Alto County Auxiliary has nine members and is emphasizing nurse recruitment as its special project. The president is Mrs. John R. Hyde, and the secretary-treasurer is Mrs. C. C. Moore.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa
Thursday at 11:15 a.m.
"THE STORY BEHIND THE DISCOVERY"

May 5 ..... A Blow to the Heart
May 12 ..... The Lucky Accident
May 19 ..... Two Mad Dogs
May 26 ..... The Bright Red Miracle

WSUI—Iowa City, Iowa
Tuesday at 11:45 a.m.
"PHYSICAL MEDICINE"

May 3 .....Oxygen as Medicine
May 10 ..... Shoes, Artificial Limbs and Braces
May 17 ..... Physical Treatment in Psychiatry
May 24 ..... Skin, Hair and Electrolysis

"THE STORY BEHIND THE DISCOVERY"

May 31 ..... Your Life's Blood

TELEVISION

WOI-TV—Ames, Iowa
Thursday at 8:30 p.m.

May 5 ..... Career Medical Technologist
May 12 ..... Sunshine and Skin
May 19 ..... Rehabilitation
May 26 ..... Facts and Fallacies of Psychiatry

KGLO-TV—Mason City, Iowa
Sunday at 5:30 p.m.

May 8 ..... Birth Injuries
May 22 ..... Highlights of the Iowa State Medical Society's Annual Meeting

PROGRAM FOR COMBATTING JUVENILE DELINQUENCY

On taking office as director of the newly created Division of Juvenile Delinquency in the Children's Bureau of the H.E.W. Department, Mr. Philip Gordon Green outlined the following objectives:

1. At least one police officer with special training in working with juveniles in every community of 20,000 or more people.
2. Good detention facilities and services available to every juvenile court in the country, so that juvenile offenders will not have to be held in company with adult criminals.
3. Expert physical and psychological examination of each youngster in serious trouble, before courts decide what kind of care and treatment is needed.
4. All courts staffed with probation workers trained in social services for children. These workers should be appointed from civil service registers.
5. Juvenile court laws and practices that measure up to the standards recommended jointly by the National Probation and Parole Association, the National Council of Juvenile Court Judges and the Children's Bureau.
6. Training schools for juvenile delinquents with complete programs of education, health, mental health, recreation, and follow-up, and with one staff member for every 15 youngsters.
7. Training schools focused on the individual youngster, to help him find a satisfying, responsible role in the community.
8. All states to have at least one special institution for emotionally disturbed youngsters, separate and apart from adults.
9. States and communities to have a well established mechanism through which public welfare, health, mental health, employment, courts, police, training schools, and educational agencies can plan programs and pool experiences with private agencies serving children and youth in the prevention and treatment of juvenile delinquency.
10. Communities and states to make regular and comprehensive reports on what is happening to juvenile delinquents, so that they and the nation can measure progress.

PARKE, DAVIS WILL ISSUE NEW LEAFLET

Parke, Davis & Company has announced plans for a new medical publication giving up-to-the-minute data on incidence and distribution of poliomyelitis in major population centers throughout the United States. Called POLIO PATTERNS, the report will be mailed regularly to physicians. It will cover, in addition, any important new clinical and research developments in the prophylaxis or treatment of polio. The National Foundation for Infantile Paralysis is to cooperate in the project.

CARDIOLOGY

The American College of Cardiology will hold its fourth annual convention at the Hotel Biltmore in New York City, May 18-20, 1955. Two scientific sessions will be devoted to a symposium on hypertension and hypertensive heart disease. Another will be devoted to advances in cardiac surgery, and a fourth to the heart and circulation in sports.

Program information can be obtained from the secretary of the College, Dr. Philip Reichert, 140 West 57th Street, New York City 19.

LAW FACILITATES DISCIPLINING OF DOCTORS

The State of Washington, at the behest of the state medical society there, now has a law permitting the suspension of physicians' licenses for relatively minor infractions of the medical practice act. The new legislation, which applies only to doctors of medicine, is to be administered by a board of physicians representing the congressional districts of the state, and license fees have been increased from $5 to $7 to pay the added costs of investigation and administration. The board will consider charges of unprofessional conduct brought by individuals, corporations and medical societies, and will, if it chooses, prefer charges on its own initiative.

It was felt that revocation of license, the only punishment for which the law provided up to now, was so severe a punishment that it was too seldom invoked.

DOCTORS ARE RECEIVING SOVIET MAILINGS

The AMA has learned that numerous physicians throughout the country recently have received a mimeographed publication called "American Soviet Facts," containing 21 half-pages of "up-to-date information" on "Health and Medical Care in the U.S.S.R." This material is published by the National Council of American-Soviet Friendship, 114 East 32nd Street, New York 16, New York, one of the leading communistic propaganda agencies in the United States.

As a safeguard against any suspicions of communist sympathies, physicians who wish to keep the record straight are advised to write to the National Council of American-Soviet Friendship requesting that their names be taken off that organization's mailing list. A carbon copy of the letter should be sent to the nearest office of the Federal Bureau of Investigation or to the F.B.I.'s Washington headquarters, along with the propaganda material received. This precaution is necessary because records are kept of persons receiving communist literature for any considerable length of time.

COUNTY SOCIETIES

MEETINGS

Black Hawk

The Black Hawk County Medical Society and its Auxiliary held a joint dinner meeting on April 19. The Auxiliary members presented a skit entitled "There *Is* a Doctor in the House."

Cherokee

The 1955 officers of the Cherokee County Medical Society are: Dr. C. L. Seaman, president; Dr. H. J. Fishman, secretary; Dr. C. E. Broderick, deputy councilor; Dr. D. C. Koser, delegate; and Dr. J. H. Wise, alternate delegate. All of them practice in Cherokee.

Dallas-Guthrie

At a meeting of the Dallas-Guthrie Medical Society held in Guthrie Center on March 31, distinguished recognition was voted to Dr. William Thornburg, of Guthrie Center, for his service to the county and for the length of his practice of medicine. Dr. Thornburg is a Life Member of the Iowa State Medical Society.

Johnson

A symposium on cardiac surgery was presented by Drs. J. W. Culbertson, L. E. January and J. L. Ehrenhaft, of the Departments of Internal Medicine and Surgery of the SUI College of Medicine, at the April 6 meeting of the Johnson County Medical Society.

Linn

Fifty-five patients got emergency medical care in Cedar Rapids during the first six months' operation of the Linn County Medical Society's emergency call service. The breakdown is as follows:

Response Made		*Need for Attention*	
House calls	34	Medical	50
Office calls	3	Injury	7
Hospital emergency room	13	Surgery	2
Handled by phone	5	Psychoneurosis	5
		Alcoholism	5

In addition to the above, there were 14 calls from individuals to whom no service was given. Through the service two people were attempting to change physicians; four placed calls but afterwards countermanded their requests; and eight were handled on a private basis when the family doctor or a substitute was found.

Wapello

Dr. Justus B. Roberts was elected president of the Wapello County Medical Society at a meeting held on April 5, to succeed Dr. Arthur Blome. Dr. Walter E. Herrick was chosen vice-president, and Dr. E. B. Hoeven was re-elected secretary-treasurer. Drs. Wilson Wolfe, D. G. Emanuel and Arthur Blome were named to the board of censors; Dr. Wolfe and Dr. Wm. Whitehouse were elected trustees; and Drs. Wolfe and Hoeven were chosen delegates.

Woodbury

Mr. Donald L. Taylor and Mr. Wilbur R. Quinn, executive secretary and physician-relations director, respectively, of the Iowa State Medical Society, were guest speakers at the April 21 meeting of the Woodbury County Medical Society.

DEATHS

Dr. Harold Francis Smith, 57, who had practiced at Iowa City for 34 years, died at Mercy Hospital there on March 25 after a six months' illness.

Dr. John Morse Griffin, 79, of Des Moines, died suddenly following a heart attack on March 27. He had practiced in the city for 55 years and was a Life Member of the Iowa State Medical Society.

Dr. Benjamin F. Denney, 71, who had practiced 44 years at Britt, died on March 18, about a year after suffering a stroke.

Dr. Reuben E. Almquist, 55, who practiced at Albert City from 1934 to 1953, died at Gary, Indiana, on March 10.

Dr. Christine Ericksen Hill, 80, a Life Member of the Iowa State Medical Society who practiced obstetrics and pediatrics at Council Bluffs for 46 years before her retirement in 1949, died on March 24 at Norfolk, Virginia.

INCOME TAX BOOKLET

The Law Department of the AMA has compiled a booklet on the federal income tax liability of physicians, consisting of a reprinting of four articles which appeared recently in JAMA. The Department will send it without charge to doctors who request it.

DRAMAMINE® IN VERTIGO



1. Bárány Pointing Test. *The patient points at a stationary object, first with his eyes open and then closed. A constant error in pointing (past pointing) with his eyes closed in the presence of vertigo indicates peripheral labyrinthine disease or an intracranial lesion.*



2. The Caloric (Bárány) Test. *The patient sits with his eyes fixed on a stationary object and the external ear canal is irrigated with hot (110 to 120 F.) or cold (68 F.) water. If the vestibular nerve or labyrinth is destroyed, nystagmus is not produced on testing the diseased side.*

3. The Rotation (swivel chair) Test. *The patient sits in a swivel chair with his eyes closed and his head on a level plane. The chair is turned through ten complete revolutions in twenty seconds. Stimulation of a normal labyrinth will cause nystagmus, past pointing of the arms and subjective vertigo.*



Notes on the Diagnosis and Management of "Dizziness"

I. Vertigo

The term "dizziness" (vertigo) should be restricted to the sensation of whirling or a sense of motion.[1] This sensation is usually of organic origin and is the tangible symptom of a specific pathology.

Moderate vertigo, with a sense of motion and a whirling sensation, may be produced by infection, trauma or allergy of the external or middle ear. Examination of the ear will usually disclose the abnormality.

Severe vertigo, which will not permit the patient to stand and causes nausea and vomiting, indicates an irritation or destruction of the labyrinth. The specific condition may be labyrinthine hydrops, an acute toxic infection, hemorrhage or venospasm of the labyrinth or a fracture of the labyrinth. Multiple sclerosis and pathology of the brain stem should be considered also.

It is important to learn if the patient's sensation is continuous or paroxysmal.[2] Paroxysmal vertigo suggests specific conditions: Ménière's syndrome, cardiac disease and epilepsy. Continuous vertigo without a pattern may be due to severe anemia, posterior fossa tumor or eye muscle imbalance.

Dramamine® has been found invaluable in many of these conditions. In mild or moderate vertigo it often allows the patient to remain ambulatory. A most satisfactory treatment regimen for severe "dizziness" is bedrest, mild sedation and the regular administration of Dramamine.

Dramamine is also a standard for the management of motion sickness, is useful for relief of nausea and vomiting of radiation sickness, eye surgery and fenestration procedures.

Dramamine (brand of dimenhydrinate) is supplied in tablets (50 mg.) and liquid (12.5 mg. in each 4 cc.). G. D. Searle & Co., Research in the Service of Medicine.

SEARLE

1. Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

2. DeWeese, D. D.: Symposium: Medical Management of Dizziness: The Importance of Accurate Diagnosis, Tr. Am. Acad. Ophth. *58*:694 (Sept.-Oct.) 1954.

WE CORDIALLY INVITE YOUR INQUIRY for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your dependents.



SINCE 1902

ALL PREMIUMS COME FROM

PHYSICIANS SURGEONS DENTISTS

ALL BENEFITS GO TO

$4,500,000 ASSETS
$22,500,000 PAID FOR BENEFITS

PHYSICIANS CASUALTY AND HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

The Month in Washington

Washington, D. C.—This session of Congress probably is more than half over. On health legislation, two things are becoming apparent. First, Congress is not attaching much urgency to some of the early-blooming issues that were so prominent in January and February. For example, it has been in no hurry to take up such subjects as reinsurance for health plans, guarantees of mortgage loans for health facilities, expanded care for military dependents, or health insurance for government employees. Action may yet come in a rush, and some of these bills may be passed, but not all. The second fact is that Congress this year does seem willing, if not anxious, to take some action on mental health.

One explanation of the slow pace of most health bills may lie in the fact that this is only the first session, and that bills not passed this year may be enacted next year, an election year. At any rate, unless a bill is definitely voted down, it remains alive until the 84th Congress adjourns in 1956.

At the top of the list of favored mental health bills are identical measures by Chairman Priest of the House Interstate and Foreign Commerce Committee and Chairman Hill of the Senate Labor and Public Welfare Committee. These bills, which were not initiated by the Eisenhower administration, provide $1,250,000 in grants for a three-year survey by non-governmental professional groups of all phases of mental health. Presumably the survey would be conducted by a Joint Commission on Mental Health, formed by the AMA Council on Mental Health and the American Psychiatric Association, with a number of other groups participating.

Considered by these committees at the same time was the administration's proposal for a three-year program of outright grants to states for new and existing mental health programs, with Congress deciding on the money needed.

The survey bill was reported favorably by the House Committee within 10 days after hearings were completed. The grants proposal was held up, with the explanation that it probably should be considered with legislation not then before the committee.

The Priest committee then turned its attention to fields other than health; it also has jurisdiction over legislation on railroads, aviation, communications and federal power. Senator Hill's committee continued on health bills, next taking up his and Senator Bridges' bill for a three-year, $90 million grant program for construction of non-federal laboratory facilities for research in a wide range of chronic diseases.

The measure failed to get AMA support, the

Board of Trustees deciding it was too broad and loosely written. Dr. George F. Lull, AMA secretary-general manager, pointed out to the committee that the bill gives no voice to the states and local communities in development of a planned and integrated system of laboratory and other research facilities.

Prior to final Appropriations Committee action on next fiscal year's budget for the Federal Civil Defense Administration, the AMA urged favorable consideration of the agency's request for medical supplies and equipment. Dr. Lull made the point that it is futile to plan for the medical phase of civil defense unless the profession has the supplies to work with. He warned of the medical problems that would arise from an enemy attack, including radioactive fallout. The House proceeded to approve a $30 million appropriation for stockpiling of supplies and equipment, $5.3 million less than the administration asked. However, the committee pointed out that FCDA has millions of dollars in unexpended balances.

This same appropriations bill carries approximately $750 million for the Veterans Administration medical budget for the next fiscal year. The measure contained one surprise: an unexpected $16,885,000 increase for a start on remodeling certain VA hospitals. The VA originally asked the Budget Bureau to approve $20 million for this purpose. The Bureau pared it down to $13,815,000 but the House raised it to $30 million.

Another bill that moved through the House with a minimum of controversy was one re-establishing the authority of the Secretary of Health, Education, and Welfare to channel surplus government property to health and educational institutions at no cost.

"SERIES H" TREASURY BONDS

The newest member of the Savings Bond family is the current-income "Series H" Bond. It offers the same complete safety and good return as the more familiar appreciation "E" Bond, but is designed for those who want return in the form of current income. Probably its most attractive feature is its federal and local tax exemption.

The chief characteristics of the "H" Bond are:

Good Yield—Three per cent to maturity (9 years and 8 months)
Current Income—Interest paid by U. S. Treasury check every 6 months
Safety—Backed by the credit of the U. S. Government; not subject to market fluctuation
Price—At par, in denominations of $500, $1,000, $5,000 and $10,000
Tax Exemption—Exempt from state and local income taxes on principal and interest
New Feature—Now eligible for purchase by "personal trust estates" as well as by individuals

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
Meticorten,* brand of prednisone.

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
1202 Locust Street Telephone 2-6766

The Neurological Hospital
2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for information
MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

PERSONALS

Dr. H. H. Perman, who has been in military service during the past two years, most of the time in Japan, has sold his share in the Medical and Surgical Clinic at Forest City to his associate, **Dr. Max Safley,** and has accepted a two-year fellowship in surgery at the Mayo Clinic.

With the assistance of **Dr. W. A. Tice,** a Waterloo psychiatrist, the Winneshiek County Mental Health Society has set up a tentative budget for a part-time guidance center at Decorah. Under the plan that is being considered, mental clinics at Waterloo, Mason City and Decorah would share the time of a psychiatrist and a psychiatric social worker.

Replacing **Dr. Rosalie Turner,** who has undertaken a residency in anesthesiology, **Dr. Donald Trefz** has begun practice in Nashua. Since 1953, Dr. Trefz has been associated with **Dr. Donald Sinkey** at Osage.

Dr. P. L. Spencer, of Essex, suffered a fractured pelvis and bruises when his car slipped on a patch of ice and went into a ditch near Massena, on March 20. His wife and one of their daughters were injured less seriously.

The Iowa Division of the American Cancer Society has elected **Dr. Robert C. Hickey** to its board of directors. Dr. Hickey is an associate professor of surgery at SUI.

Dr. Duane D. Warden, a specialist in obstetrics and gynecology, has joined **Dr. Robert M. Collins** in practice at the Council Bluffs Clinic. He is a graduate of the school of medicine at Washington University, St. Louis, he has done postgraduate work at the University of Arkansas and at Queens Hospital, Honolulu, and most recently, he has served two years with the Army.

Dr. L. H. Prewitt, of Ottumwa, read a paper on "Eosinophilic Infiltration Due to Allergy, Stress and Parasympathaticotonia" at the Civil Aviation Medical Association's meeting in Washington, D. C., in March. And late in April, he spoke on the same subject at the American College of Allergists' meeting in Chicago.

An open house was held at the high school building in Coin on Friday evening, April 8, honoring **Dr. Edward Luke,** who has practiced in that community for 50 years. He is a Life Member of the Iowa State Medical Society.

widely prescribed
for oral penicillin therapy

PENTIDS

SQUIBB 200,000 UNIT PENICILLIN G POTASSIUM

TABLETS
for adults



proved effectiveness



convenient dosage



economical for patient
Bottles of 12 and 100

CAPSULES
for infants & children



open and add
soluble penicillin to
fruit juice . . .



. . . cola, ginger ale, etc.



. . . milk or formula
Bottles of 24 and 100

EITHER WAY IT'S PENICILLIN T. I. D.

SQUIBB

PENTIDS® IS A SQUIBB TRADEMARK

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

On March 28, the American Cancer Society announced that **Dr. R. G. Bunge**, professor of urology at SUI, whose research it is subsidizing, has succeeded in growing *extra vivo* cancers of the bladder, ureter and other organs. One of his immediate objectives is to test whether or not some substance in the urine of cancer patients is essential to the growth of such tumors.

At least one Iowa physician has joined the select group of men whose admirers have presented them new automobiles in appreciation of their work. He is **Dr. J. H. McCall**, of Allerton, whose fellow citizens put on a program in his honor on April 2. Dr. McCall has served Allerton for 47 years.

Dr. Leslie E. Weber, Jr., a 1954 graduate of the College of Medicine at SUI who is serving his internship at Sacramento County Hospital, in California, will join his father in practice at Wapello on July 1. The younger Dr. Weber put in 18 months of military service, part of it in Germany, following his graduation from high school.

On completion of his internship in Ogden, Utah, **Dr. Keith Miller** will begin practice at Agency.

Dr. G. H. Rodgers left Mt. Ayr on April 6 for Brooke Army Hospital, Ft. Sam Houston, San Antonio, to begin two years of military service. He has worked in association with **Dr. D. E. Mitchell** since July, 1953.

The JOURNAL erred in reporting the subject of the short course that **Dr. Robert A. Powell**, of Shenandoah, took at Tulane during February and March. It was orthopedics, rather than obstetrics.

Dr. John Reinert joined the staff of the Mental Health Institute at Independence recently. A graduate of the University of Illinois school of medicine, Dr. Reinert intends returning there in June for further residency training in neurology.

The American Public Health Association has chosen **Dr. Abraham Gelperin**, director of the Des Moines-Polk County Health Department, to serve on its committee on rural health. "We are flattered," Dr. Gelperin has remarked, "by having our work and studies in Polk County so recognized by national public health authorities."

Dr. A. F. Harrington was released from St. Luke's Hospital, Cedar Rapids, on April 4, after his second attack of poliomyelitis. Thirty-nine years ago, type-one polio left him with partial paralysis of the left leg, and this more recent illness, type-three polio, made him ill for three weeks and gave him a temporary 50 per cent impairment of his use of both legs.

A blood sample sent to a test center showed that he now has an immunity of 256 to type-one and an immunity of 4,096 to type-three poliomyelitis. Blood tests also revealed that Dr. Harrington's wife and daughter had had polio in recent years, without discernible sequelae.

The community of Whiting held a pot-luck supper on March 24 to celebrate the return of **Dr. J. L. Garred,** who has just completed a two-year tour of duty with the Navy.

At Oskaloosa on March 29, the office of **Dr. G. W. Bennett** was burglarized, after thieves were successful in slipping a thin tool behind the bolt of his door. The same method failed to gain entrance for them to the offices of **Dr. G. H. Clarke** and a dentist, **Dr. J. W. Wray.**

Dr. Kenneth R. Cross, clinical associate professor of pathology at SUI and chief of laboratory service at the Iowa City V-A Hospital, and **Dr. Emory D. Warner,** professor and head of pathology at SUI, have been granted $6,156 by the scientific advisory board of the Tobacco Industry Research Committee to investigate pre-cancerous changes in the lungs of persons who have no clinical pulmonary disease.

Mead Johnson & Company has given $2,500 to SUI to finance a study by members of the Department of Orthopedics on constituents of protein that seem helpful in counteracting diseases of cartilage in children.

Dr. Emile P. Eckart, a psychiatrist, joined the staff of the Kersten Clinic, in Fort Dodge, on March 14. He has been a fellow of the Meninger School of Psychiatry, at Topeka, for the past five years, and at the same time, assistant chief of the continued treatment section at the Winter V-A Hospital there.

Dr. Fred Roules has announced his intention of beginning practice at Mediapolis in July.

On July 1, **Dr. Eugene F. VanEpps** will become head of the Department of Radiology at SUI, succeeding **Dr. H. Dabney Kerr,** whose resignation was announced in the April issue of the JOURNAL.

Dr. Frank E. Coburn has resigned his associate professorship in psychiatry at SUI to accept a similar position at the University of Saskatchewan. A native of Ontario, he served a residency in his specialty at Iowa City from 1940 until 1943, and returned there as a faculty member in 1946, after serving in the Royal Canadian Army Medical Corps.

Dr. Robert B. Allender, formerly of Marion, who

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York



DES MOINES Office:
O. W. Parker, Rep.,
4003 11th Street Place,
Telephone 3-3804

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates—1955

SURGERY—Surgical Technic, Two Weeks, May 16, June 6
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, June 6
Surgical Anatomy & Clinical Surgery, Two Weeks, June 20
Surgery of Colon & Rectum, One Week, June 13
General Surgery, One Week, May 23, October 17
Gallbladder Surgery, Ten Hours, June 27
Thoracic Surgery, One Week, June 6
Esophageal Surgery, One Week, June 13
Fractures & Traumatic Surgery, Two Weeks, June 20

GYNECOLOGY—Office & Operative Gynecology, Two Weeks, June 13
Vaginal Approach to Pelvic Surgery, One Week, June 6

MEDICINE—Two-Week Course, September 26
Electrocardiography & Heart Disease, Two Weeks, July 11
Hematology, One Week, June 13

RADIOLOGY—Clinical Diagnostic Course, Two Weeks, by appointment
Radium Therapy, One Week, May 23
X-Ray Therapy, Two Weeks, by appointment

PEDIATRICS—Clinical Course, Two Weeks, by appointment
Neuromuscular Diseases, Two Weeks, June 20
Pediatric Cardiology, One Week, October 10 and 17

CYSTOSCOPY—Ten-Day Practical Course, every two weeks

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

THE RETREAT HOSPITAL

Des Moines, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
MARTIN J. KRAKAUER, Psychologist
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist

SYDNEY L. MACMULLEN, Administrator
HERBERT W. VETTER, Asst. Administrator

2801 Woodland Ave. **Phone 5-2121**

will complete a SUI residency in obstetrics and gynecology in June, has announced that he will locate in Des Moines.

Dr. Frank Rizzo, of Sibley, was elected president of the Northwest Iowa Medical Society at its quarterly meeting on March 14, at Sheldon. **Dr. L. H. Mattice,** of Sheldon, was re-elected secretary-treasurer.

The scientific portion of the Society's program consisted of a panel discussion of diabetes in children by an SUI medical team.

Dr. C. C. Graves, director of Iowa mental institutions, and **Dr. Norman B. Nelson,** dean of the College of Medicine at SUI, joined on March 19 in recommending greater attention to mental health problems by general practitioners and by the planners of new general hospital buildings. Dr. Graves said that some authorities are recommending that G-P residents be given as much training in psychiatry as in medicine, surgery and gynecology, and he added that the N-P problems are "one-fourth of what the physician is going to meet in general practice."

Dr. Nelson said that SUI medical students are getting a great deal more psychiatry than formerly. And to Dr. Nelson's statement that "The day and age of psychiatric beds in general hospitals is developing rapidly," Dr. Graves added that some plans for new general hospitals call for the placing of rooms for mental patients right along the same corridor with those for medical and surgical cases.

Dr. O. S. Keiser, a graduate of the College of Medical Evangelists, in Los Angeles, who interned at Madison General Hospital, in Wisconsin, is associated with **Dr. V. W. Swayze** at Muscatine. Dr. Keiser practiced briefly at Waupun, Wisconsin.

Dr. E. S. Brintnall, chief of the surgical service at the Iowa City V-A Hospital and clinical associate professor of surgery at SUI, left on March 26 for a two-month lecture tour in Europe. He will make addresses at University Hospital, Copenhagen; German Surgical Society meetings in Munich; the Innsbrucke Medical Society; the International College of Surgeons meeting in Geneva; and U. S. Army hospitals at various places. En route, he will be guest lecturer at surgical group meetings at Cleveland, Ohio, and Manchester, New Hampshire. His topics are aortic grafting, resection of the stomach and cancer of the mouth and neck.

Carroll Medical Center announces the addition to its staff of **Dr. J. V. Sullivan,** an ophthalmologist, formerly of Freeport, Illinois. He is a graduate of

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

"Premarin" relieves menopausal symptoms with virtually no side effects, and imparts a highly gratifying "sense of well-being."

"Premarin"®—Conjugated Estrogens (equine)

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

ANNOUNCEMENT . . .

L. E. McCleary of Des Moines, medical service representative for the Zemmer Co., Pittsburgh, Pa., for the past several years, and secretary of the Iowa Drug Travelers, is now associated with the Kay Pharmacal Company as Iowa representative.

As a wholesaler of ethical pharmaceuticals since 1938, it has been our privilege to serve the profession in New Mexico, Texas, Oklahoma, Arkansas, Missouri and Kansas.

Now that we have extended our services to cover Iowa, you are cordially invited to make the Kay Pharmacal Company your source of supply for ethical products of merit.

Samples and literature of the various Kay specialties, as well as the specialties and standard items of the many nationally recognized manufacturers, whom we represent, are available on request for clinical use. Mr. McCleary will be glad to detail any of these products and leave any desired material with you. Any products detailed will be placed in the drug store of your choice, if you so desire.

•

"ETHICAL PRODUCTS OF MERIT"

•

KAY PHARMACAL CO.

1312 N. Utica • P. O. Box 6098
TULSA, OKLAHOMA

the medical school at Yale University and did post-graduate study in diseases of the eye at Harvard, at the Cleveland Clinic and at the Cleveland City Hospital.

Dr. T. J. Dorsey, Jr., who for the past eighteen months has practiced with his father at Fort Dodge, has accepted a three-year residency in surgery at the Fresno County Hospital, in California.

Dr. Valiant D. French, of Cedar Falls, has been appointed medical director of the Student Health Clinic at the Iowa State Teachers College, succeeding the late **Dr. Joseph H. Gamet.**

Dr. Leon J. Galinsky, medical director of the tuberculosis control unit at Broadlawns Polk County Hospital, Des Moines, was declared winner of the first annual Walter L. Bierring Award for outstanding contributions to the control of tuberculosis by an Iowa physician. The presentation was made at the annual meeting of the Iowa Tuberculosis and Health Association, in Des Moines on April 13.

Dr. Austin E. Schill, of Des Moines, heretofore a general practitioner, has announced his intention of limiting his practice to obstetrics and gynecology.

On March 23, **Dr. Ben T. Whitaker**, of Boone, was one of 18 guests at one of President Eisenhower's stag parties. When he received the telegraphed invitation, he had suspected some one of his less illustrious friends of playing a practical joke on him, and he took pains to question the Western Union operators closely about its authenticity. On the morning of the 23rd, it became evident that the White House staff was inclined to exercise the same sort of care. When he answered the telephone in his Washington hotel room, Dr. Whitaker was asked to identify himself quite fully —to give his full name, his place of residence, etc. —before he was tendered a second invitation. Then he learned that Mrs. Eisenhower and her mother, Mrs. Dowd, both of whom once were his patients, wished him to come an hour early that evening so that they might have a chance to meet him again.

The President's personal physician, General Snyder, entertained Dr. Whitaker at lunch and, later in the afternoon, showed him through the public rooms of the White House and went with him to call on Mrs. Eisenhower and Mrs. Dowd. The President came in while Dr. Whitaker was there, and the two men went down to the party together.

Dr. Whitaker was president of the Iowa State Medical Society in 1951 and 1952.

Dr. Samuel J. Zoekler returned from Marine Corps duty at Ft. Belvoir, Virginia, and, on April 15, became a full time staff physician in internal medicine at the V-A Hospital in Des Moines.

Digitalis

in its completeness

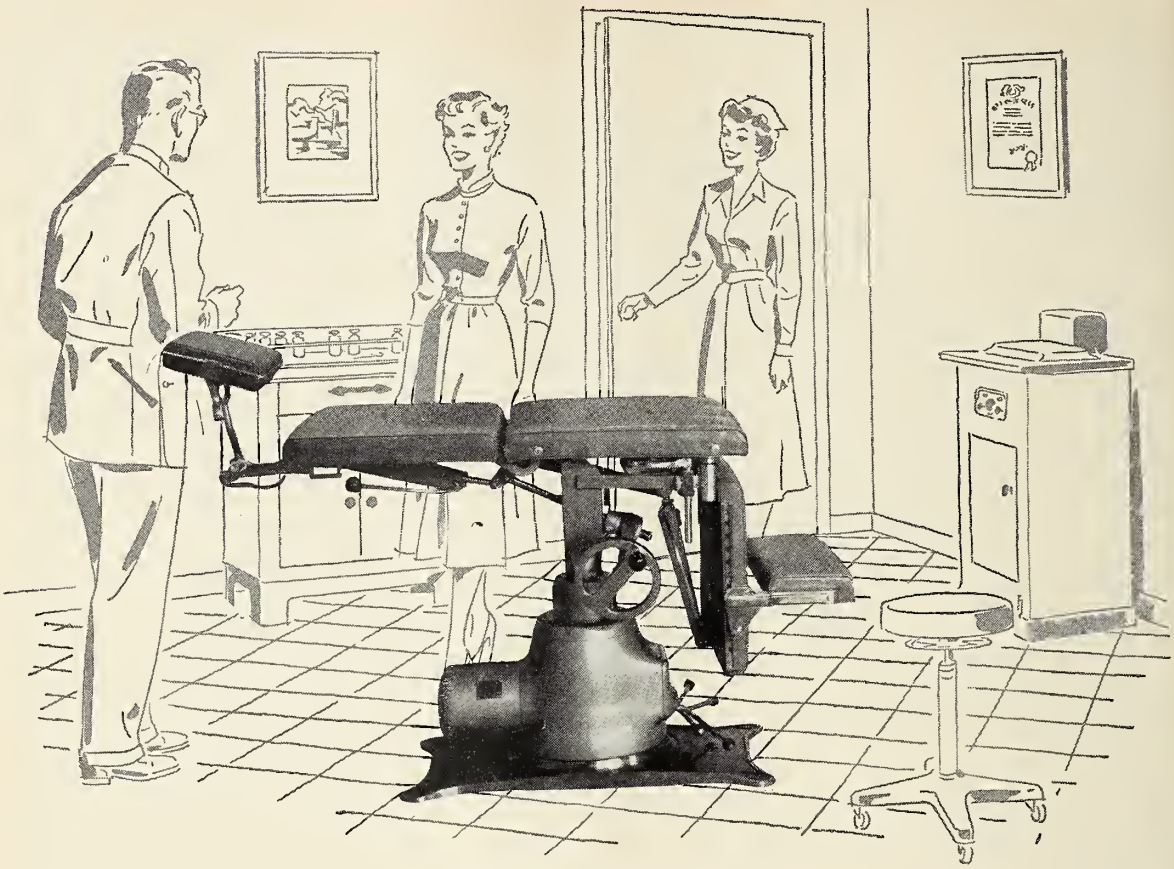


Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.



You Get *More* in a RITTER Universal Table...

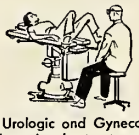
... than in any other table in the field. Here is the table that offers you the most ... the motor-driven hydraulically operated base, an outstanding feature, *exclusive* on Ritter tables ... extreme high and low range of positions ... complete equipment for normal treatment room practice ... unusual flexibility for patient positioning ... making this Ritter Universal Type 2 Table able to meet all your day-to-day requirements. Patients appreciate the comfort and secure feeling of this Ritter Table ... doctors appreciate the easy operation of the Ritter Universal Table that makes their treatment days less fatiguing.



Ritter Type 2 Table in Proctologic Position.



Type 2 Table in horizontal position with arm board extension for blood pressure check.



For Urologic and Gynecologic work; perineal cut-out removed and pan extended.



"Contour Chair" position with patient comfortably relaxed for nose and throat examination.

Distributed by:

PHYSICIANS AND HOSPITALS SUPPLY COMPANY

1400 HARMON PLACE MINNEAPOLIS 3, MINNESOTA

Call or Write Us for Additional Information.

Dr. Kenneth C. Piercy, of Ames, has been elected secretary of the Story County Medical Society, to replace the late **Dr. W. B. Armstrong.**

For reasons of health, **Dr. Robert P. Mason**, of Des Moines, has found it necessary to discontinue his practice. Upon his retirement, he says, the Highland Park section of the city, where 40,000 people live, will be without a full-time GP.

SURGERY SHORT COURSE

The University of Minnesota announces a continuation course in surgery for general surgeons, to be held at the Center for Continuation Study, on the Minneapolis campus, May 24-28.

The guest speaker will be Professor Ian Aird, of the University of London Postgraduate Medical School. The course is under the direction of Dr. O. H. Wangensteen.

ROCKY MOUNTAIN CANCER CONFERENCE

The guest-speaker list for the Rocky Mountain Cancer Conference, at Denver on July 13 and 14, includes Dr. Elmer Hess, president-elect of the AMA, urology; Dr. William Dock, internal medicine; Dr. J. Peerman Nesselrod, proctology; Dr. David A. Wood, pathology; Dr. Harry M. Nelson, gynecology; Dr. Wendell G. Scott, radiology; Dr. Louis Thomas Byers, plastic surgery; and Dr. Joel J. Pressman, ear, nose and throat.

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

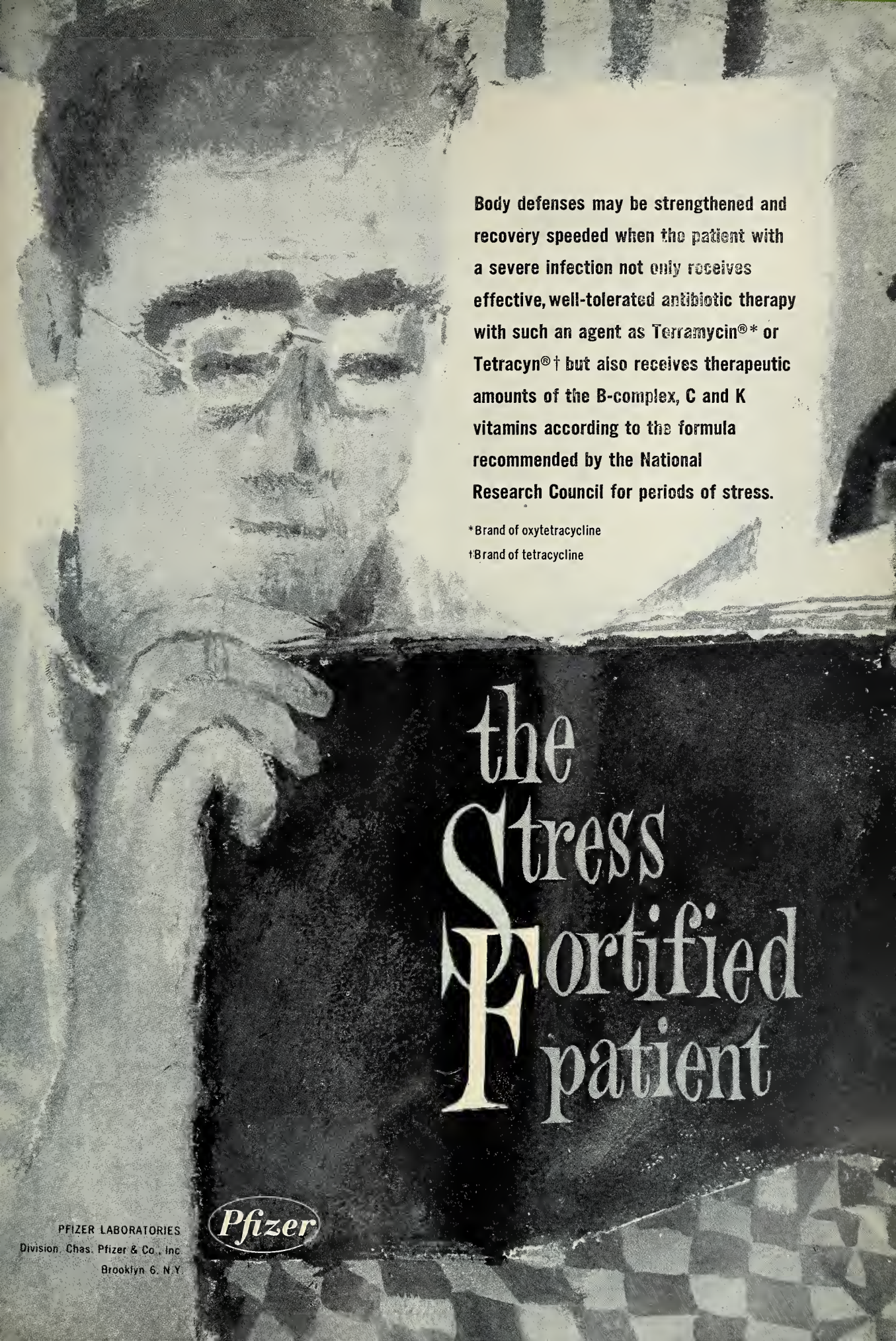
As of April 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland), Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.) .....Lt., U.S.N.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Bickford, R. H., Iowa City
(Lawton, Oklahoma) .....A.U.S.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.) .....Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) .....Capt., A.U.S.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
(Marine Corps Recruit Depot, San Diego,
Calif.) .....Lt.(j.g.), U.S.N.R.

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair	L. H. Ahrens, Fontanelle	A. Jay Gantz, Greenfield	A. S. Bowers, Orient
Adams	C. L. Bain, Corning	J. C. Nolan, Corning	J. C. Nolan, Corning
Allamakee	R. R. Jeffries, Waukon	D. W. Dohnalek, Waukon	D. W. Dohnalek, Waukon
Appanoose	G. L. Richey, Centerville	C. H. Mitchell, Cincinnati	E. F. Ritter, Centerville
Audubon	P. E. James, Audubon	R. L. Bartley, Audubon	L. E. Jensen, Audubon
Benton	L. W. Koontz, Vinton	N. C. Knosp, Belle Plaine	N. C. Knosp, Belle Plaine
Black Hawk	I. R. Powers, Waterloo	J. S. LePoidevin, Waterloo	C. D. Ellyson, Waterloo
Boone	G. H. Sutton, Boone	F. N. Johnson, Boone	R. L. Wicks, Boone
Bremer	R. E. Shaw, Waverly	R. P. Hardwig, Waverly	F. R. Sparks, Waverly
Buchanan	J. F. Loeck, Independence	J. W. Barrett, Jr., Independence	P. J. Leehey, Independence
Buena Vista	P. W. Brecher, Storm Lake	T. E. Shea, Storm Lake	H. E. Farnsworth, Storm Lake
Butler	M. D. Enna, Dumont	F. F. McKean, Allison	F. F. McKean, Allison
Calhoun	W. W. Weber, Pomeroy	R. A. Lynberg, Lake City	G. S. Rost, Lake City
Carroll	P. D. Anneberg, Carroll	J. M. Tierney, Carroll	J. R. Martin, Carroll
Cass	D. E. Wilcox, Atlantic	E. M. Juel, Atlantic	R. M. Needles, Atlantic
Cedar	H. E. O'Neal, Tipton	O. E. Kruse, Tipton	H. E. O'Neal, Tipton
Cerro Gordo	D. W. Clapsaddle, Clear Lake	R. C. Brown, Mason City	H. G. Marinos, Mason City
Cherokee	C. L. Seaman, Cherokee	H. J. Fishman, Cherokee	C. E. Broderick, Cherokee
Chickasaw	P. C. Richmond, New Hampton	E. B. Becker, New Hampton	M. J. McGrane, New Hampton
Clarke	C. R. Harken, Osceola	G. I. Armitage, Osceola	G. I. Armitage, Osceola
Clay	C. C. Jones, Spencer	E. E. Munger, Spencer	C. C. Jones, Spencer
Clayton	E. S. Kettelkamp, Monona	J. D. Lyon, McGregor	P. R. V. Hommel, Elkader
Clinton	J. E. O'Donnell, Clinton	R. O. Emmons, Clinton	V. W. Petersen, Clinton
Crawford	D. N. Crabb, Denison	R. A. Huber, Charter Oak	R. M. Johnson, Denison
Dallas-Guthrie	W. A. Seidler, Jr., Jamaica	W. C. Wildberger, Perry	W. A. Seidler, Jr., Jamaica A. M. Cochrane, Perry
Davis	C. D. N. Gilfillan, Bloomfield	W. D. Haufe, Bloomfield	H. J. Gilfillan, Bloomfield
Decatur	W. N. Doss, Leon	E. E. Gamet, Lamoni	E. E. Gamet, Lamoni
Delaware	W. J. Willett, Manchester	Mary Ann Croker, Manchester	R. E. Clark, Manchester
Des Moines	R. F. Moerke, Burlington	R. A. Vercio, Burlington	
Dickinson	Dale Undem, Spirit Lake	Ruth F. Wolcott, Spirit Lake	Ruth F. Wolcott, Spirit Lake
Dubuque	A. C. Pfohl, Dubuque	J. W. Moberly, Dubuque	D. F. Ward, Dubuque
Emmet	D. E. Wolters, Estherville	C. V. Lindholm, Armstrong	C. K. Kirkegaard, Estherville
Fayette	J. P. Gallagher, Oelwein	R. S. Jaggard, Oelwein	A. F. Grandinetti, Oelwein
Floyd	T. G. Baumann, Charles City	R. A. Fox, Charles City	E. V. Ayers, Charles City
Franklin	W. W. Taylor, Sheffield	A. P. Smith, Hampton	W. L. Randall, Hampton
Fremont		A. R. Wanamaker, Hamburg	Kenneth Murchison, Sidney
Greene	W. E. Chase, Rippey	J. I. Limburg, Jr., Jefferson	E. D. Thompson, Jefferson
Grundy	W. K. Kienzle, Wellsburg	L. E. Frink, Reinbeck	E. A. Reedholm, Grundy Center
Hamilton	J. L. Ptacek, Webster City	D. C. Anderson, Stanhope	B. F. Howar, Webster City
Hancock-Winnebago	A. H. Dulmes, Klemme	J. T. Enggas, Britt	T. J. Irish, Forest City
Hardin	G. M. Edvenson, Iowa Falls	F. N. Cole, Iowa Falls	L. F. Parker, Iowa Falls
Harrison	B. E. Kenney, Woodbine	F. X. Tamisiea, Missouri Valley	A. C. Bergstrom, Missouri Valley
Henry	J. G. Widmer, Wayland	P. G. Couchman, Mt. Pleasant	W. H. Megordon, Mt. Pleasant
Howard	D. O. Maland, Cresco	P. A. Nierling, Cresco	P. A. Nierling, Cresco
Humboldt	R. W. Beardsley, Livermore	J. H. Coddington, Humboldt	I. T. Schultz, Humboldt
Ida	E. H. Heilman, Ida Grove	J. B. Dressler, Ida Grove	M. W. Grubb, Galva
Iowa	D. A. Paulsen, Victor	I. J. Sinn, Williamsburg	C. F. Watts, Marengo
Jackson	F. J. Swift, Jr., Maquoketa	L. B. Williams, Maquoketa	F. J. Swift, Maquoketa
Jasper	L. H. Koelling, Newton	L. D. Norris, Newton	J. W. Ferguson, Newton
Jefferson	F. H. McClurg, Fairfield	C. L. Palcheff, Fairfield	J. W. Castell, Fairfield
Johnson	R. C. Hardin, Iowa City	J. S. Greenleaf, Iowa City	E. J. Boyd, Iowa City
Jones	T. M. Redmond, Monticello	R. W. Myers, Monticello	T. M. Redmond, Monticello
Keokuk	E. R. Gann, Sigourney	R. G. Gillett, Sigourney	R. G. Gillett, Sigourney
Kossuth	D. L. Bray, Algona	J. M. Schutter, Algona	M. G. Bourne, Algona
Lee	G. H. Ashline, Keokuk	Sebastian Amberry, Keokuk	J. H. Ashline, Keokuk R. L. Feightner, Ft. Madison
Linn	C. H. Stark, Cedar Rapids	R. C. Locher, Cedar Rapids	H. J. Jones, Cedar Rapids
Louisa	J. H. Chittum, Wapelo	K. T. DeYarman, Morning Sun	L. E. Weber, Wapello
Lucas	R. C. Gutch, Chariton	R. E. Anderson, Chariton	A. L. Yocum, Chariton
Lyon	H. H. Gessford, George	S. H. Cook, Rock Rapids	S. H. Cook, Rock Rapids
Madison	R. W. Carson, Winterset	J. E. Evans, Winterset	J. E. Evans, Winterset
Mahaska	G. W. Bennett, Oskaloosa	R. L. Alberti, Oskaloosa	G. S. Atkinson, Oskaloosa
Marion	K. D. Banks, Knoxville	T. D. Clark, Knoxville	H. L. Bridgeman, Knoxville
Marshall	O. D. Wolfe, Marshalltown	H. E. Sauer, Marshalltown	R. C. Carpenter, Marshalltown
Mills	W. A. DeYoung, Glenwood	T. E. Shonka, Malvern	W. A. De Young, Glenwood
Mitchell	M. O. Eiel, Osage		T. E. Blong, Stacyville
Monona	P. G. Ingham, Mapleton	P. L. Wolpert, Onawa	C. W. Young, Onawa
Monroe	F. N. Bay, Albia	D. N. Orelup, Albia	W. S. Chester, Albia
Montgomery	S. R. Smith, Red Oak	G. M. Skallerup, Red Oak	E. L. Croxdale, Villisca
Muscatine	V. W. Swayze, Muscatine	Samuel Bluhm, Muscatine	L. H. Whitmer, Muscatine
O'Brien	I. E. Brown, Hartley	W. S. Balkema, Sheldon	E. B. Getty, Primghar
Osceola	F. B. O'Leary, Sibley	J. H. Thomas, Sibley	F. M. Rizzo, Sibley
Page	R. A. Powell, Shenandoah	K. V. Jensen, Clarinda	C. H. Flynn, Clarinda
Palo Alto	J. R. Hyde, Emmetsburg	C. C. Moore, Emmetsburg	H. L. Brereton, Emmetsburg
Plymouth	H. L. Vander Stoep, LeMars	F. C. Bendixen, LeMars	H. L. Vander Stoep, LeMars
Pocahontas	E. O. Loxterkamp, Rolfe	C. L. Jones, Gilmore City	C. L. Jones, Gilmore City
Polk	D. C. Wirtz, Des Moines	T. A. Bond, Des Moines	M. T. Bates, Des Moines
Pottawattamie	W. O. Griffith, Council Bluffs	I. J. Hanssmann, Council Bluffs	C. V. Edwards, Council Bluffs
Poweshiek	T. V. Niemann, Brooklyn	L. C. Hickerson, Brooklyn	S. D. Porter, Grinnell
Ringgold		J. W. Hill, Mt. Ayr	
Sac	J. W. Gauger, Early	John Hubiak, Odebolt	C. E. Lierman, Lake View
Scott	J. R. Shorey, Davenport	A. B. Hendricks, Davenport	P. A. White, Davenport
Shelby	J. H. Spearing, Harlan	R. E. Donlin, Harlan	A. J. Ryan, Harlan
Sioux	E. N. Eneboe, Hawarden	C. B. Murphy, Alton	M. O. Larson, Hawarden
Story	G. J. Hegstrom, Ames	K. C. Piercy, Ames	J. D. Conner, Nevada
Tama	L. G. Schaeferle, Gladbrook	A. J. Havlik, Tama	A. J. Havlik, Tama
Taylor	R. W. Boulden, Lenox	G. W. Riml, Bedford	R. W. Boulden, Lenox
Union	R. H. Kuhl, Creston	H. J. Peggs, Creston	H. J. Peggs, Creston
Van Buren	Kiyoshi Furumoto, Keosauqua	J. T. Warrell, Keosauqua	Kiyoshi Furumoto, Keosauqua
Wapello	J. B. Roberts, Ottumwa	E. B. Hoeven, Ottumwa	P. D. McIntosh, Ottumwa
Warren	C. A. Trueblood, Indianola	R. C. McGeehon, Indianola	C. A. Trueblood, Indianola
Washington	T. M. Mast, Washington	W. S. Kyle, Washington	G. E. Montgomery, Washington
Wayne	L. B. Calbreath, Humeston	C. F. Brubaker, Corydon	D. R. Ingraham, Sewal
Webster	E. B. Dawson, Ft. Dodge	J. F. Vincent, Ft. Dodge	C. J. Baker, Ft. Dodge
Winneshiek	Garfield Miller, Calmar	D. W. Wright, Decorah	E. F. Hagen, Decorah
Woodbury	P. L. Bettler, Sioux City	V. R. Heimann, Sioux City	D. B. Blume, Sioux City
Worth	R. L. Olson, Northwood	C. T. Bergen, Northwood	R. L. Olson, Northwood
Wright	R. A. Young, Clarion	J. R. Christensen, Eagle Grove	S. P. Leinbach, Belmond


Body defenses may be strengthened and recovery speeded when the patient with a severe infection not only receives effective, well-tolerated antibiotic therapy with such an agent as Terramycin®* or Tetracyn®† but also receives therapeutic amounts of the B-complex, C and K vitamins according to the formula recommended by the National Research Council for periods of stress.
*Brand of oxytetracycline
†Brand of tetracycline
the Stress Fortified Patient
Pfizer
PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N.Y.

Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Eckberg, R. A., Hubbard
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Brooke Army Med. Ctr., Ft. Sam Houston, Texas) .....Capt., A.U.S.
Farrior, Richard T., Iowa City
(Tampa, Florida) .....
Field, C. A., Cresco
(Manhattan, Kans.) .....Capt., A.U.S.
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Garred, J. L., Whiting
(San Francisco, Calif.) .....Lt., U.S.N.R.
Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) .....Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.
Hanske, Edward A., Des Moines
(Camp Gordon, Georgia) .....Capt. U.S.A.H.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City .....A.U.S.
Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Jenkins, H. F., Ogden
(Randolph A.F.B., Texas) .....U.S.A.F.
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) .....1st Lt., A.U.S.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.) .....
Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.
Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Maxwell, J. R., Iowa City
(Tacoma, Washington) .....Capt., A.U.S.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery. A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Nielsen, G. E., Des Moines
(APO Seattle, Washington) .....Lt. Col., A.U.S.

Relax the best way ... pause for Coke



Time out for refreshment

DRINK Coca-Cola REG. U.S. PAT. OFF.



Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Perman, Harvey H., Forest City
(Yokasuka, Japan) .....U.S.N.
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfaff, R. A., Dubuque
(Camp Pendleton, Calif.) ..... Lt., U.S.N.R.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Prendergast, L. J., Iowa City
(Oceanside, California) ..... U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Reading, Donald, Iowa City
(U.S. Army Examining Station, Des Moines) .....
Rhode, M. C., Iowa City
(Philadelphia, Pa.)
Rodgers, G. H., Mt. Ayr
(Brooke Army Hosp., Ft. Sam Houston, Texas)
.....Lt. A.U.S.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Bethesda, Maryland) .....Lt., U.S.N.R.
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Denver, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.
Spohnheimer, L. N., Donnellson
(Mountain Home AFB, Idaho) .....1st Lt., USAF
Stivers, T. W., Des Moines
(Hutchinson, Kansas) .....Lt. (jg) U.S.N.R.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Swanson, Eric M., Iowa City
(Omaha, Nebraska) .....
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(11th Field Hosp., APO 178, New York City)
.....Capt., A.U.S.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wall, J. M., Boone
(Bryan A.F.B., Texas) ..... 1st Lt., U.S.A.F.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st Lt., U.S.A.F.
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven
(New London, Connecticut) .....U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 **Capacity 200 beds**

Under the Supervision of the Sisters of Mercy

An Institution for the Study and Treatment of Nervous and Mental Disorders.

Conditioned Reflex and Antabuse Therapy for Alcoholism

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director
JAMES D. MAHONEY, M.D., Associate Director **RICHARD B. LEANDER, M.D.**

PHYSICIANS' DIRECTORY

SURGERY

JULIAN M. BRUNER, M.D.
PRACTICE LIMITED TO
PLASTIC SURGERY AND SURGERY OF THE HAND
DES MOINES, IOWA
1005 BANKERS TRUST BUILDING PHONE 4-4835

ORTHOPEDICS

EVERETT M. GEORGE, M.D.
PRACTICE LIMITED TO
ORTHOPEDIC SURGERY
DES MOINES, IOWA
1010 EQUITABLE BUILDING PHONE 3-2828

VERL A. RUTH, M.D.
PRACTICE LIMITED TO
FRACTURES
913 BANKERS TRUST BUILDING
DES MOINES, IOWA

BRONCHOSCOPY AND ESOPHAGOSCOPY

JAMES A. DOWNING. M.D.
ROBERT R. UPDEGRAFF, M.D.
HAROLD J. McCOY, M.D.
614 BANKERS TRUST BLDG. DES MOINES, IOWA

BYRON M. MERKEL, M.D.
CHESTER C. WOODBURN, JR., M.D.
DES MOINES, IOWA
501 EQUITABLE BUILDING PHONE 4-3179

NEUROSURGERY

WALTER D. ABBOTT, M.D.
JOHN T. BAKODY, M.D.
PRACTICE LIMITED TO
NEUROSURGERY
DES MOINES, IOWA
900 DES MOINES BUILDING PHONE 3-5156

CIRCULATION

THE

Journal

OF THE IOWA STATE MEDICAL SOCIETY

CONTENTS

Clinical Problems of Acute Poliomyelitis
J. C. MacQueen, M. D., and J. C. Mulier, M.D., Iowa City 267

Resection of the Terminal Aorta and Replacement With Aortic Homograft
E. S. Brintnall, M.D., Rodman E. Taber, M.D., Sam H. Walker, M.D., and S. E. Ziffren, M.D., Iowa City 272

The Significance of Pyuria in Children
C. W. Latchem, M.D., Des Moines .. 276

Medical Aspects of Intractable Ascites
Paul From, M.D., Des Moines 279

Endometriosis: Newer Concepts
Austin E. Schill, M.D., Des Moines .. 283

State University of Iowa College of Medicine Clinical Pathologic Conference 285

(Continued on page iv)

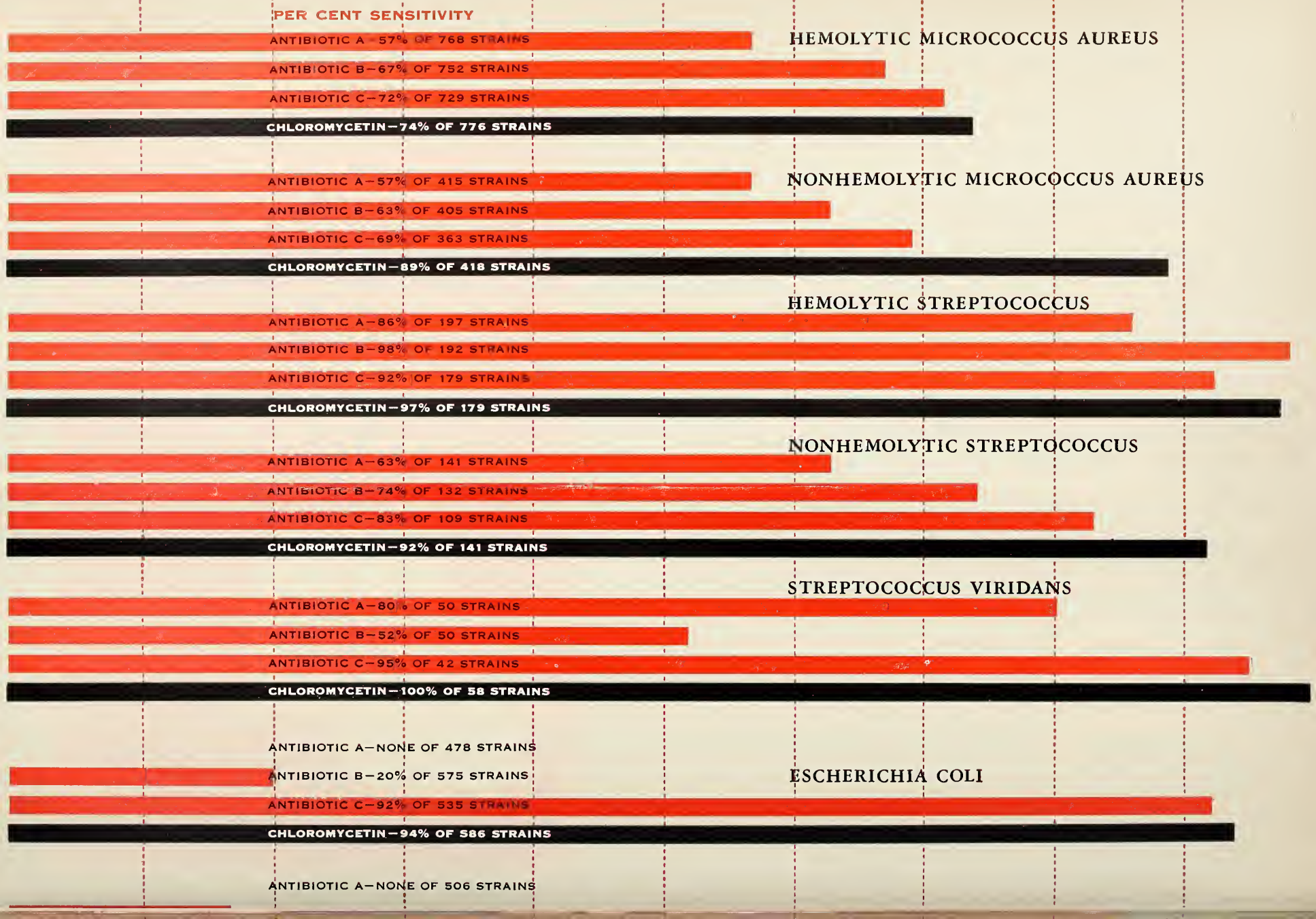
consider
ILOTYCIN
(ERYTHROMYCIN, LILLY)
FIRST

wide clinical range:
80 percent of all bacterial infections and 96 percent of all acute bacterial respiratory infections respond readily

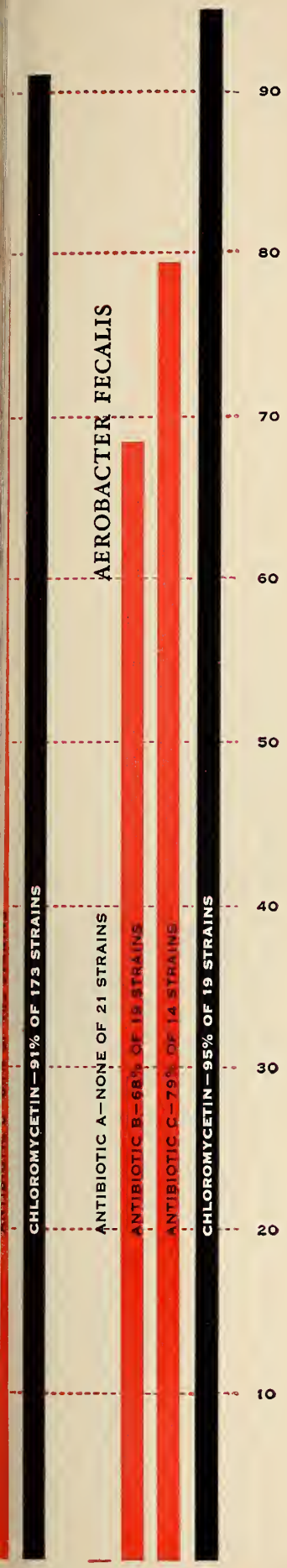
notably safe, well tolerated

Lilly

JUNE, 1955


PER CENT SENSITIVITY
HEMOLYTIC MICROCOCCUS AUREUS
ANTIBIOTIC A—57% OF 768 STRAINS
ANTIBIOTIC B—67% OF 752 STRAINS
ANTIBIOTIC C—72% OF 729 STRAINS
CHLOROMYCETIN—74% OF 776 STRAINS
NONHEMOLYTIC MICROCOCCUS AUREUS
ANTIBIOTIC A—57% OF 415 STRAINS
ANTIBIOTIC B—63% OF 405 STRAINS
ANTIBIOTIC C—69% OF 363 STRAINS
CHLOROMYCETIN—89% OF 418 STRAINS
HEMOLYTIC STREPTOCOCCUS
ANTIBIOTIC A—86% OF 197 STRAINS
ANTIBIOTIC B—98% OF 192 STRAINS
ANTIBIOTIC C—92% OF 179 STRAINS
CHLOROMYCETIN—97% OF 179 STRAINS
NONHEMOLYTIC STREPTOCOCCUS
ANTIBIOTIC A—63% OF 141 STRAINS
ANTIBIOTIC B—74% OF 132 STRAINS
ANTIBIOTIC C—83% OF 109 STRAINS
CHLOROMYCETIN—92% OF 141 STRAINS
STREPTOCOCCUS VIRIDANS
ANTIBIOTIC A—80% OF 50 STRAINS
ANTIBIOTIC B—52% OF 50 STRAINS
ANTIBIOTIC C—95% OF 42 STRAINS
CHLOROMYCETIN—100% OF 58 STRAINS
ESCHERICHIA COLI
ANTIBIOTIC A—NONE OF 478 STRAINS
ANTIBIOTIC B—20% OF 575 STRAINS
ANTIBIOTIC C—92% OF 535 STRAINS
CHLOROMYCETIN—94% OF 586 STRAINS
ANTIBIOTIC A—NONE OF 506 STRAINS

sensitivity of common pathogens to CHLOROMYCETIN and three other major antibiotic agents



more effective against more strains...

Chloromycetin®

for today's problem pathogens

Because of the increasing emergence of pathogenic strains resistant to commonly used antibiotics, judicious selection of the most effective agent is essential to successful therapy. In vitro sensitivity studies serve as a valuable guide to the antibiotic most likely to be most effective. Both clinical experience and sensitivity studies indicate the greater antibacterial efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) in the treatment of many common infections.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

Adapted from Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* 157:305 (Jan. 22) 1955.

MEDICAMENTA VERA

Parke, Davis & Company
DETROIT, MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV JUNE, 1955 No. 6

CONTENTS

(continued from page i)

EDITORIALS

The 1955 Annual Meeting 295
A Picture of Industrial Medicine in Iowa . 295
Barometric Pressure and Health 297
Miss Mary L. McCord 298
We Stand Corrected 298

SPECIAL DEPARTMENTS

Blue Cross-Blue Shield 299
President's Page 302
The Doctor's Business 303
The Journal Book Shelf 304
Mental Illness 305
Iowa Academy of General Practice . . . 307
State Department of Health 308
Woman's Auxiliary News 311
Coming Meetings 315
County Societies
Meetings 316
Deaths 316
The Month in Washington xviii
Speakers' Bureau Schedules xx
Personals xxii
Roster of Iowa Physicians in Military Service xxxv

MISCELLANEOUS

AMA Committee Reports on Causes of Fee Splitting 271
International College of Surgeons . . . 282
Marks of a Capable Practitioner 298
June Clinics in Denver 305
Meritorious Service Awards 307
General Practitioner of the Year 315
Booklet on Premature Babies xix
Lederle Symposium at Madison xxxvii
Combination of Work and Vacation . . . xxxvii
State Society Get Testimonial xxxvii

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
MISS MARY L. MCCORD, Business Manager..Des Moines
MR. EDWARD W. HAMILTON, Assistant Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

WENDELL L. DOWNING, M.D., Trustee.....Le Mars
GEORGE H. SCANLON, M.D., Trustee.....Iowa City
FRED STERNAGEL, M.D., Trustee.....West Des Moines
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio*, Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



Clinical Problems of

Acute Poliomyelitis

J. C. MacQUEEN, M.D., AND J. C. MULIER, M.D.

IOWA CITY

In spite of the progress that has been made in the development of a vaccine to prevent poliomyelitis, the disease may for several years continue to be a medical problem. The medical profession will continue to be responsible for improving the care available to individuals who contract the disease.

In the past, emphasis has been placed on the hospitalization of the patient with poliomyelitis in hospitals staffed and equipped as polio centers. The recognition of the symptoms suggesting the disease, and the dispatching of the patient to a polio center have been the extent of the family physician's responsibility. This limitation upon the average general practitioner's participation has curtailed clinical experience and stifled interest in the clinical course of the acute disease.

The purpose of this paper is to present information about some of the clinical problems related to acute poliomyelitis. The data have been taken from an extensive study of patients with poliomyelitis admitted to the Department of Pediatrics, State University of Iowa Hospitals, during the summer of 1952. There were 402 patients, ranging from newborn infants to children 16 years of age. A careful follow-up study has been completed to determine their progress.

PHYSICAL FATIGUE AND MUSCULAR PARALYSIS

It is often said that if a patient exercises during the acute stage of poliomyelitis he increases the possibility of incurring muscular paralysis. Any physician who has cared for a group of patients with the disease remembers a case or cases in which the correlation between fatigue and muscular paralysis seemed impressive. Such instances leave strong clinical impressions and have kept alive the reasonable supposition that fatigue may further damage the affected and controlling neuron.

It was decided to examine the validity of this concept. To do this, a questionnaire was devised to be completed by the parents at the time of the admission. They were requested to describe in detail the child's physical activity from the appearance of the preliminary signs of infection to the day of admission. Because a method of grading these records of exercise was necessary, the following classifications of physical exercise were established: (1) bedrest; (2) activity inside the home; (3) moderate activity outside the home; and (4) severe exercise (such as baling hay, swimming, etc.).

A method of grading the severity of the disease was also necessary. The following classifications were established: (0) nonparalytic disease; (1) temporary paralytic disease (i.e., patients required physical therapy and orthopedic care for several months); and (2) permanent paralytic disease. The information obtained from the questionnaire was used in making a correlation graph (Figure 1).

Any correlation between the degree of exercise and the degree of paralysis is difficult to establish, when 40 patients whose disease resulted in paralysis were at bedrest from the onset of their symptoms and 86 patients whose disease resulted in no paralysis were at full activity from the onset of their symptoms.

Dr. MacQueen and Dr. Mulier are staff members in the Departments of Pediatrics and Orthopedics at the College of Medicine at the State University of Iowa.

Since there are many intangibles and variables in "clinical grading," these data are not presented in a dogmatic fashion to prove that exercise has no effect upon the degree of paralysis. Rather, they are presented to show that a large group of poliomyelitis patients show no correlation between the amount of exercise taken following the early signs of disease and the degree of subsequent paralysis.

THE EFFECT OF PHYSICAL FATIGUE ON MUSCLE PARALYSIS

Severity of Exercise	Severity of Disease 0	1	2
1	10	6	40
2	71	21	14
3	58	7	27
4	86	13	14

$x^2 = 87.99$

To be significant at 1 percentile: $x^2 = 16.812$

Figure 1

Of the data contained in the chart, those concerning the 40 patients who had flaccid paralysis at the onset of their disease are the most interesting. These data suggest a hypothesis that the severity of a patient's illness is established early in the course of disease and is not particularly influenced by physical fatigue or exercise.

SPINAL FLUID EXAMINATIONS

There have been questions raised concerning the desirability of performing a lumbar puncture as part of a routine diagnostic procedure for the child who has clinical signs of poliomyelitis. To the child, a lumbar puncture is psychologically, as well as physically, traumatic. This trauma is particularly important because it is superimposed upon the distress caused him by the onset of his illness, by his family's concern about "polio," and by his fear of hospitalization. Thus, it seems reasonable to ask how much the examination of the cerebral spinal fluid contributes to the examiner's knowledge of the case.

Other investigators have reported clinical studies indicating that there is a rapid rise in the total number of cells in the cerebral spinal fluid at the onset of the disease. The cells change in type and continue to decrease in number over a period of approxmiately 2 weeks. Lumbar punctures reported in this series were done at the time the patient was admitted. They were, therefore, uniformly done at the time of the onset of the clinical signs of disease. So that data might be collected, lumbar punctures were done routinely. The number of cells in the cerebral spinal fluid at the time of admission in a series of 364 patients is graphically recorded in Figure 2.

The graph indicates that the number of cells present in the cerebral spinal fluid during the acute disease is not related to the duration of the illness.

The severity of the infection of the central nervous system is not related to the number of cells in the cerebral spinal fluid. The graph shows that the number of cells in the cerebral spinal fluid of patients with non-paralytic disease, paralytic disease, and bulbar disease did not vary sufficiently to be indicative or diagnostic of the type or severity of the disease present.

The variations in the number of cells present in the cerebral spinal fluid was most perplexing. In this series, 15 patients had cell counts of fewer than 10 cells per cubic mm. If the patient has the clinical signs of the disease and yet has a normal number of cells in the cerebral spinal fluid, the diagnosis of poliomyelitis stands. Thus, we must

CEREBRAL SPINAL FLUID COUNTS ON POLIOMYELITIS PATIENTS

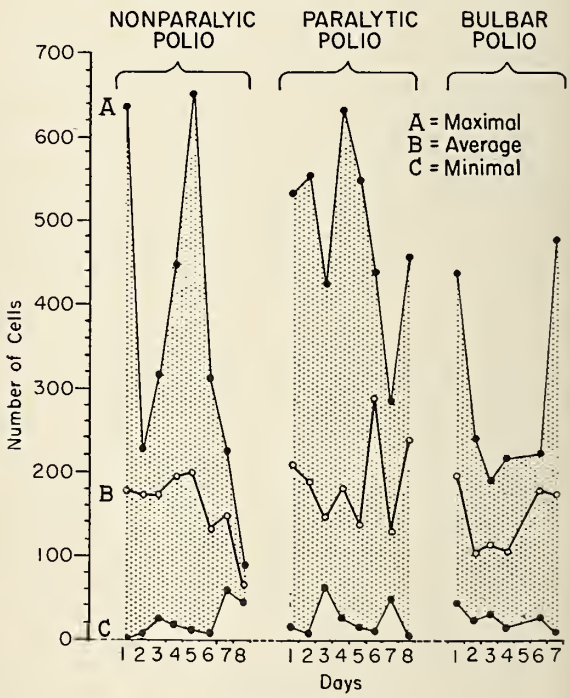


Figure 2

say that the number of cells present in the cerebral spinal fluid *does not* establish the diagnosis of poliomyelitis. It is apparent that for the present poliomyelitis is a clinical diagnosis. On the basis of the information presented, a lumbar puncture contributes nothing to the examiner's knowledge of the patient's disease.

The most common statement made in defense of lumbar punctures is that they are of value in identifying the patient with a purulent meningitis. Because patients with poliomyelitis have such similar clinical histories and physical findings, it can be stated categorically that few are diagnostic problems. In contrast to the patient with poliomyelitis who tells of a recent minimal illness, a low-grade fever, and characteristic findings of muscular involvement, the patient with a purulent meningitis has symptoms of sepsis, high fever, and other clinical and laboratory signs of a bacterial infection. It is agreed that at times a lumbar puncture may be a necessary procedure to rule out the possibility of a bacterial infection of the central nervous system in the atypical case, but it is an error to suppose that it is a helpful procedure as a routine examination of the patient with clinical signs of poliomyelitis.

It would seem desirable to relegate the lumbar puncture to its proper place. That place is not part of the routine examination of the child with clinical signs of poliomyelitis.

Immunization and the Localization of Paralysis

In 1949, McKlosky reported his observation that children who had had an inoculation within a three-month period before contracting acute poliomyelitis frequently became paralyzed in the extremity in which the inoculation was given. Since then, others have written in support of his findings.

In this series, 26 children had received intramuscular immunization procedures within a six-week period prior to their acute poliomyelitis. Of this group, 12 had nonparalytic poliomyelitis, and 14 had paralytic poliomyelitis. Of the 14 with paralytic disease, 11 had muscular involvement in the arm that had been used for the inoculation. This established a correlation of approximately 80 per cent between the site of the inoculation and the subsequent paralysis.

Our study has not answered the critical question of whether some of the children who had paralytic disease would have had nonparalytic poliomyelitis if they had received no prior immunization. It can merely be said that of those children who had inoculations, 54 per cent had paralytic disease. This was in contrast to a 43 per cent incidence of paralytic disease in the entire study group.

The children whose paralytic disease was seemingly related to an immunization procedure were between the ages of 18 months and 6 years. They had received their "booster shots." Immunization schedules have been worked out to give infants and children optimal protection from important diseases. It is no minor decision to disrupt this desirable program of preventive medical care each summer because of the possibility of poliomyelitis.

The data of this study indicate a relationship between immunization inoculations and the site of paralysis in children over 18 months of age. No infant receiving his first series of immunizing inoculations had paralytic disease in the extremity in which an inoculation had been given. Therefore, any postponement of immunization procedures should be restricted to the older children receiving booster shots.

Exacerbations of Acute Poliomyelitis

Exacerbations of paralytic poliomyelitis have been observed among patients who were thought to have passed the acute phase of their disease. Among the patients of this series, only one child had an exacerbation of his acute poliomyelitis. He was a seven-year-old child who was dismissed at the end of a seven-day period. His disease had been diagnosed as nonparalytic. Twenty-four hours later, he had a fever and nuchal rigidity, and he developed muscular weakness of the right forearm.

The fact that exacerbations do occur does not imply the need for prolonged medical and hospital care, but parents should be made aware of the possibilty and instructed to obtain medical care immediately if signs of disease recur.

Changes in Personality

One of the most puzzling findings in the follow-up study of a group of patients with poliomyelitis is the frequent occurrence of personality changes following the acute signs of the disease. There are many factors that may be wholly or partially responsible for this sequela.

One of the factors implicated is the psychic trauma that occurs with the hospital care given patients with poliomyelitis. An evaluation of this factor in children has been difficult because reliable subjective information is difficult to obtain. It was decided that this problem might better be investigated among adult patients. A group of 97 adults who had recently had poliomyelitis were interviewed as a part of a post-epidemic survey. They were representatives of all types and degrees of severity of the disease. They were asked whether they were aware of any personality problems during their convalescent period. Sixty-one per cent answered that they recognized mild to incapacitating personality changes. Of the group of 97 adults, only 34 per cent had been hospitalized during their illness; therefore, it does seem unlikely that the hospitalization was a basic cause for their personality difficulties.

It has been suggested that since poliomyelitis is a generalized viral infection, it results in a mild encephalitis more frequently than is ap-

preciated clinically. This possibility cannot be proved or disproved. If it is true, it might be presumed that the more severe the disease, the more severe the encephalitis, and so the more severe the personality change. This presumption is only partially supported by the finding that 47 per cent of the children with nonparalytic disease had signs of personality change, whereas 51 per cent of the children with paralytic disease had a similar difficulty. The presumption seems to be supported by the finding that 78 per cent of the children who had bulbar and/or encephalitic forms of the disease showed personality changes.

Another factor in causing personality changes may be a decreased tolerance to neuromuscular activity that follows the disease. That this may be an explanation is emphasized by the reported correlation made by patients between the duration of their ill-defined fatigability and the duration of their personality difficulties.

The problem of personality changes that occur after acute poliomyelitis is presented not because it is adequately understood, but because it is a common and important sequela of the disease. Physicians who supervise the early convalescent period must be aware of this possibility, so they may assist the patient and family in understanding this perplexing and sometimes distressing residual of acute poliomyelitis.

CLINICAL COURSE OF BULBAR POLIOMYELITIS

Experience has shown that it is desirable for patients with bulbar polio to be cared for in a poliomyelitis hospital center. Here they can receive the life-saving forms of specialized care, which include the use of respirators and nursing techniques.

Because these cases have been treated in polio centers, the clinical course of the patient with bulbar polio is known to only a few. The family physician is frequently lacking in his information about the problem, so that he may have difficulty in discussing with the family the prognosis of the patient with bulbar polio. Thus, it seems timely to present some information concerning the clinical course of the patient with bulbar polio.

The most frequent question concerning bulbar poliomyelitis is, "How often does it happen?" There is a surprising similarity in the reported series as to the percentage of patients with poliomyelitis who develop bulbar involvement. That figure is approximately 7 per cent of all patients who have clinical poliomyelitis.

Another frequent question is, "If a patient develops signs of bulbar involvement, how fast will the disease progress to a point at which he needs specialized care?" As part of this study, information was obtained at the time of each patient's admission as to when the earliest signs of bulbar involvement were noted. The time interval between the onset of those signs and the onset of clinical signs necessitating special supportive procedures was determined. Figure 3 indicates that patients classified as "bulbar spinal" and "bulbar" had a considerable time interval between the onset of the signs of bulbar involvement and the need for specialized care. It was

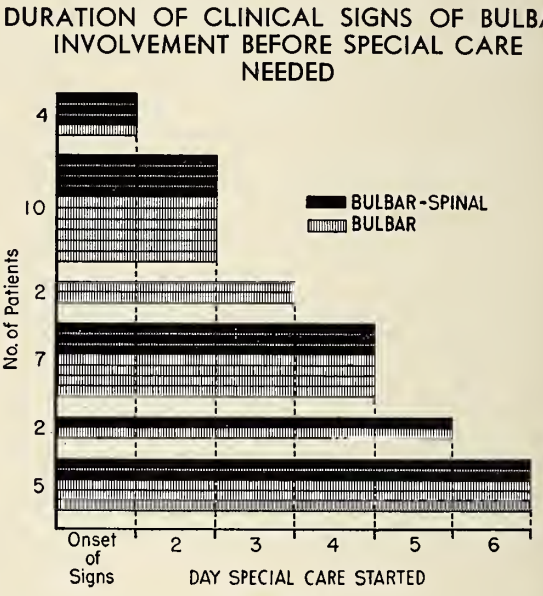


Figure 3

the unusual case that required specialized care within 24 hours after the first bulbar signs were noted.

That there is a time interval before the need for specialized care occurs does *not* suggest that the patient should be retained in the home to observe the progress of the disease. It is common knowledge that it is most hazardous to transport a patient with advanced signs of bulbar polio. These difficulties are sufficiently great to emphasize the need for the early identification of signs of bulbar involvement. When the diagnosis of poliomyelitis is made, it is desirable to alert those supervising the care of the patient as to the possibility of this complication. During the acute phase of his disease, every patient should be tested periodically for his ability to swallow and speak.

The patients classified as "bulbar-circulatory center" and "bulbar-respiratory center" present a unique problem. As indicated by Figure 4, 40 per cent of these patients required specialized care within a 24-hour period after the onset of their bulbar symptoms. There was 100 per cent mortality among this group. Experience has shown that the early institution of supportive care for such patients does not affect the outcome of the disease. It is commonly accepted that the severity of acute poliomyelitis may result in the destruction of the controlling neuron, with permanent paralysis of an extremity. The corollary of this severe form of the disease when it involves vital centers is overwhelming, irreversible damage and death.

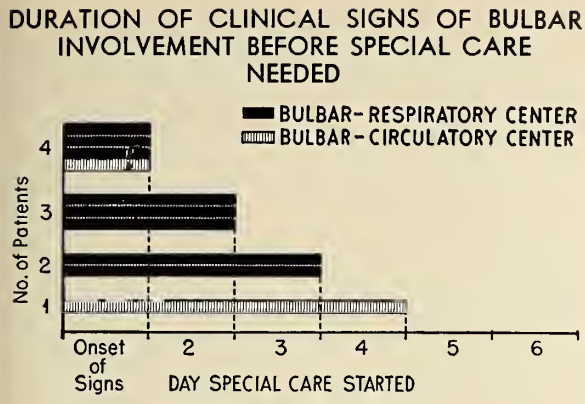


Figure 4

During the acute phase of his disease, every patient with bulbar involvement should have periodic tests of his blood pressure and vital signs so that the involvement of his vital centers may be followed.

The apprehension concerning bulbar poliomyelitis frequently results in the question, "What is the mortality among patients with bulbar polio?" The majority of such patients have a mild and a brief illness. Some 17 per cent of patients admitted with bulbar involvement had no subsequent progression and required no specialized care after admission.

Forty-nine per cent had a relatively mild course. Such patients required specialized care only during the period of their acute illness and had no residuals from their disease. These are the patients who have profited by the techniques that have been devised during the last few years for the care of the patient with bulbar polio.

In the total group of patients reported, the mortality rate was high. Seventeen per cent of the patients with bulbar polio died during the early days of their illness. Without exception, these patients had clinical signs of "bulbar-circulatory center" or "bulbar-respiratory center" involvement.

Mortality figures given by any polio center at the end of an epidemic are deceiving, for they do not indicate how many patients have been severely paralyzed by bulbar or spinal-bulbar involvement. Such patients may live for months or years, requiring varying degrees of supportive care. An eventual demise of such an individual is not listed as a polio death, but the factor that changed the patient's life from health to invalidism was poliomyelitis.

SUMMARY

The clinical records of 402 infants and children with poliomyelitis have been used as a source of information concerning some clinical problems related to acute poliomyelitis.

AMA Committee Reports on Causes of Fee Splitting

The Special Committee on Medical Practices which the AMA asked to study the causes of fee splitting and make recommendations has found general agreement among doctors that the most potent factor is the discrepancy between the financial rewards that are available to surgeons, on the one hand, and to doctors who provide only diagnostic and medical services, on the other.* Some surgeons, the report stated, are willing to split fees in an effort to equalize those rewards; others do so because they feel that competition makes them; and still others do so in order to fill out what would otherwise be inadequate work loads.

More oaths, rules, audits and inspection, the Committee believes, would accomplish very little. Instead, it recommends the following four-point program as a means of attacking the basic economic causes:

1. A subcommittee of the AMA Committee on Medical Practices should be set to work formulating a relative value scale for the whole practice of medicine and surgery. The scale it would produce would be in points, not in dollars, and it would serve as an indication both to doctors and to the public of the proper relation between fees for various medical and surgical services. As the underwriters of health insurance began heeding it, the scale would bring about a decrease in the economic inequities that foster fee splitting.

2. The AMA Department of Public Relations should concentrate upon increasing public appreciation for the value of non-surgical work.

3. The AMA should encourage the specialty boards to relax the restrictions that limit diplomates to a single segment of medicine.

4. The AMA should continue to discourage arbitrary restrictions by hospitals against general practitioners as a group.

The Committee's study included some analysis of public feeling toward the profession. It found that county and state public-relations campaigns, as well as that of the AMA, are being well conducted, but it suggested that it would be highly valuable for doctors to invite prominent and respected laymen to sit in with medical committees in handling the work of public protection and public service.

The AMA Board of Trustees has given serious consideration to the Committee's suggestions. It has indicated, however, that it will ask the specialty groups to formulate point systems, instead of setting up a division of the AMA Committee on Medical Practices to do the job. The Board expressed its willingness to accept the Special Committee's second recommendation.

* J.A.M.A., 158:49-50, (May 7) 1955.

Resection of the Terminal Aorta And Replacement With Aortic Homograft

E. S. BRINTNALL, M.D., RODMAN E. TABER, M.D.,
SAM. H. WALKER, M.D., AND S. E. ZIFFREN, M.D.
IOWA CITY

DURING THE SIX-MONTH period April to September 1954, inclusive, resection of the terminal aorta and replacement with aortic homograft was carried out on seven occasions at the Veterans Administration Hospital and at the University Hospitals, in Iowa City. These were our initial experiences with this interesting and relatively new operative procedure. In six patients, the operation was done for symptomatic arteriosclerotic aneurysm of the lower abdominal aorta. In one patient, the procedure was indicated because of thrombosis of the terminal aorta. There was no instance of graft rupture or of hemorrhage from an anastomosis line. Two patients died following operation. Five survived and give promise of resuming normally active lives.

The four grafts used in patients in the Veterans Administration Hospital were obtained under aseptic conditions from appropriate autopsy material, were preserved in a 10 per cent solution of blood serum in Tyrode's solution containing penicillin and streptomycin, and were stored at 4° centigrade. Cultures of the solutions revealed "no growth." The grafts were used from 5 to 14 days after preservation. On one occasion an aortic homograft similarly preserved for a period of 30 days was discarded at the time of operation because it appeared swollen and was slimy to the touch. In that instance, another "serum-Tyrode's" preserved graft with better physical characteristics was used. The "serum-Tyrode's" preserved grafts generally appeared and handled as do fresh vessels at the operating table; they held sutures well. This method of graft preservation was advocated by Gross[1, 2] and is in common use at the present time.

The three grafts used in patients in the University Hospital were human aortic homografts obtained from autopsy material. These had been quick-frozen, sterilized by immersion in ethylene oxide solution, then freeze-dried and preserved at room temperature in sealed glass vacuum tubes. They were reconstituted by submersion in saline for 30 minutes at the time of surgery. This method of graft preservation was similar to that described by Hyatt,[3] Hufnagel[4] and Deterling.[5] The specific method used at the University Hospital has been described recently in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.[6] The freeze-dried grafts were easily handled, held sutures well and resembled fresh aorta upon reconstitution.

The immediate results in the surviving five patients of this series were satisfactory as judged by relief of pain and restoration or improvement of arterial circulation to the lower extremities. Late results of these operations cannot be evaluated for several years. A study of the literature does not aid one in determining the long-term results, for the first aortic homografts used clinically were the relatively short ones used by Gross[1, 2] in the repair of coarctation of the aorta beginning in 1948 and reported in 1951. The first abdominal aortic homograft utilized to replace aorta resected for aneurysm was reported by



Figure 1. Aortogram in patient No. 2 (R.N., VAH-8279). The aorta appears normal for a distance of 2-3 cm. below the renal arteries.

This paper was read at the annual meeting of the Iowa Academy of Surgery, Iowa City, September 25, 1954. The authors are staff members of the Surgical Service, Veterans Administration Hospital, Iowa City, and of the Department of Surgery, SUI College of Medicine.



Figure 2. Aortogram in patient No. 3 (C.H., VAH-8836). Note normal aorta for a distance of about 2 cm. below the renal arteries.



Figure 3. Lateral roentgenogram of the lumbar spine in patient No. 3 (C.H., VAH-8836). Note erosion of third and fourth lumbar vertebrae.

Dubost[7] in 1951. DeBakey and Cooley[8] and others reported the use of human aortic homografts in 1953, but their experience is also too recent to furnish a basis for long-term evaluation.

Because it seemed to us that the operative procedure was too hazardous and too recently developed for routine use in all patients with lesions of the abdominal aorta, we have not advocated the procedure for patients with small, asymptomatic abdominal aneurysms, nor for poor-risk patients with well-tolerated arterial insufficiency of the lower extremities due to thrombotic disease of the terminal aorta. Experience in the past with symptomatic abdominal aneurysms has demonstrated that most patients die within a year or so following onset of symptoms. Estes[9] showed in a statistical study that about 33 per cent of patients with abdominal aortic aneurysms die of the disease within a year, if they remain untreated.

All patients in our series had aortograms performed during the course of their preoperative examinations. Usually the diagnosis of abdominal aortic aneurysm (or thrombosis) was obvious upon routine physical examination. However, the aortogram provided accurate and essential information before operation as to the extent of the aortic involvement. A sufficient length of uninvolved aorta below the renal arteries (two to three centimeters) must be available to permit application of a clamp and division of the aorta and placement of sutures between the patient's aorta and the graft, if the procedure is to be carried out in the manner described in this paper. Renal circulation must continue during the hour (or thereabouts) that the aorta is clamped and before the graft can be sutured into place and circulation restored through the graft.

Figure 1 reveals a typical aortogram, in this instance that of patient No. 2, who had an abdominal aneurysm. The roentgenogram was made after we had injected 12 cc. of 70 per cent Urokon Sodium into the aorta through a long 16-gauge needle inserted obliquely from a point below the tip of the left twelfth rib.

Figure 2 shows the aortogram obtained in patient No. 3. His aneurysm had ruptured posteriorly, eroding the third and fourth lumbar vertebrae. The erosion is shown in Figure 3, a lateral roentgenogram of the lumbar spine. The patient had required large dosages of morphine because of agonizing back pain. Since operation, he suffers no pain, receives no narcotics and has apparently been restored to good health.

CLINICAL OBSERVATIONS

Table 1 presents the essential clinical data concerning the seven patients in this series, and Figure 4 illustrates the configurations of their aortic lesions and the aortic homografts utilized in repair.

The grafts were sutured into place with continuous and interrupted sutures of fine arterial

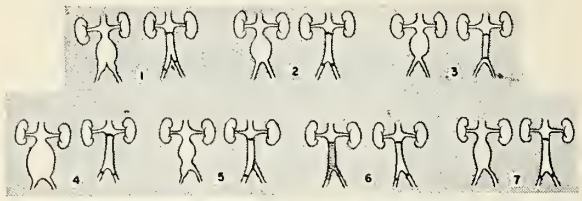


Figure 4. Configurations of the aneurysms of the terminal aorta (and the extent of thrombosis in patient No. 6) and the homografting necessary following resection.

silk. The technic used provides intima-to-intima approximation, since the vessel walls are everted at the sites of anastomosis. Figure 5 illustrates interrupted and continuous flat mattress suturing, which effects eversion and thereby produces a smooth approximation of intima of graft to intima of the recipient vessel.

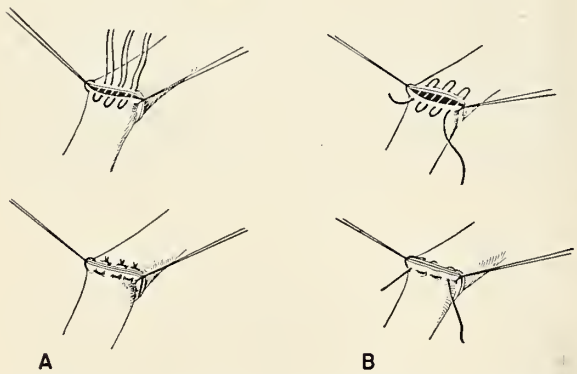


Figure 5. A—interrupted everting flat mattress sutures. B—continuous everting flat mattress suture. After placing either type of everting suture, one should use an over-and-over continuous suture to insure secure closure.

Operative access to the lower aorta and to the iliac vessels was obtained through long midline abdominal incisions which extended from the xiphoid to the pubis. In exposing the lower aorta, one divides the lateral reflection of peritoneum to the left colon, and lifts the left colon with its mesentery to the right along with the third portion of duodenum, as dissection is carried out in the retroperitoneal area.

Figure 6 reveals the homografts in place after resection of the terminal aorta in patients No. 2 and No. 6. Because these homografts must be "invaded" by reparative tissue from the recipient, it is considered essential to surround the grafts with healthy vascular structures. Therefore, retroperitoneal fatty-areolar tissue is brought both behind the graft and between it and the vertebrae. The intact left colon mesentery is placed in front of and on the graft in all instances.

In this series of patients, no significant alterations in blood pressure or pulse resulted from the temporary (about one hour) interruption of aortic blood flow by the clamping of the aorta below the renal arteries. Continuous blood transfusion during the operation prevented significant degrees of operative shock from developing. Usually 2,500 to 4,000 cc. of transfused blood was required during and following operation to maintain blood volume and blood pressure. The extensive dissection resulted in considerable blood loss from small vessels, but in no instance did sudden and severe bleeding occur from a major vessel. In some cases with adherent aneurysms, troublesome oozing occurred from small veins in the retroperitoneal area, particularly from tiny veins emptying into the vena cava.

That there were two operative deaths in the series of seven patients is regrettable, but is not considered prohibitive when the seriousness of the disease is considered. Patient No. 4 died quite unexpectedly six days after operation. When he was last visited by the nurse, his condition had seemed quite satisfactory. His pulse and blood pressure were normal, he was alert, oriented and cheerful, and he did not appear to be in any danger. When the nurse returned to his room ten minutes later, he was dead. Autopsy failed to reveal the cause of death. A small accumulation of blood in the retroperitoneal zone was not thought significant, and there was no evidence of cerebral accident, pulmonary embolus, hemorrhage or coronary occlusion. It was postulated that this patient developed an abnormal cardiac mechanism, perhaps ventricular fibrillation.

Patient No. 6 tolerated his operation well, but postoperatively, he fell into shock, failed to regain consciousness and died four hours after completion of surgery. An autopsy revealed that his

TABLE 1
ABDOMINAL AORTIC GRAFTS

No.	*Patient*	*Age*	*Hosp. No*	*Operation*	*Lesion*	*Graft*	*Result*
1.	C.V.	57	VAH-RE7985	4-7-'54	Aneurysm	Serum-Tyrode's	Improved
2.	R.N.	59	VAH-8279	5-13-'54	Aneurysm	Serum-Tyrode's	Improved
3.	C.H.	66	VAH-8836	5-29-'54	Aneurysm	Serum-Tyrode's	Improved
4.	R.G.	59	VAH-RE9379	6-30-'54	Aneurysm	Serum-Tyrode's	Died, PO-6 Ventric. Fib.
5.	G.P.	61	SUI-52-4165	7-1-'54	Aneurysm	Freeze-dried	Improved
6.	W.E.	62	SUI-54-7576	8-18-'54	Aneurysm	Freeze-dried	Died, PO-1 Rupt. aorta
7.	R.H.	63	SUI-54-7443	9-29-'54	Aneurysm	Freeze-dried	Improved

Summary of clinical experience with aortic homografts used to replace terminal aorta in seven patients. All patients were males, and all lesions were symptomatic.

death was due to rupture of the aorta at the site of an aneurysm 4 cm. proximal to the graft and above the site at which the serrefine clamp had been applied to the aorta. In addition, the patient had severe old myocardial infarction. The aneurysm had not been disclosed in the aortogram obtained preoperatively.

COMMENT

At the present time, only homologous graft material is being used in our clinical cases, but recent experimental and clinical experience with artificial tubes for replacement of aortic segments as reported by Vorhees, Jaretzki and Blakemore[10] and by Shumaker and King[11] are of interest. It is possible that tubes of certain plastics or of nylon may replace homografts in aortic grafting procedures, thereby solving the problems encountered in obtaining and preserving human homografts. Heterogenous aortic grafts have been utilized experimentally in dogs, but since apparently they have not been entirely satisfactory,[12] it would seem inadvisable for us to use them in human patients at the present time.

SUMMARY

1. Aortic homografts have been utilized in seven patients to replace the terminal aorta resected for aneurysm or thrombosis.

2. Two operative deaths occurred in this series from causes unrelated to failure of the grafts or the anastomotic suture lines. Five patients survive and show gratifying early results from the operation.

REFERENCES

1. Gross, R. E., Bill, A. H., Jr., and Pierce, E. C., II: Methods for preservation and transplantation of arterial grafts; observations on arterial grafts in dogs; report of transplantation of preserved arterial grafts in 9 human cases. Surg. Gynec. & Obst., **88**:689-701, (June) 1949.

2. Gross, R. E.: Treatment of certain aortic coarctations by homologous grafts; report of 19 cases. Ann. Surg., **134**:753-768, (Oct.) 1951.

3. Hyatt, G. W., Turner, T. C., Bassett, C. A. L., Pate, J. W., and Sawyer, P. M.: New methods for preserving bone, skin and blood vessels. Postgrad. Med., **12**:239-254, (Sept.) 1952.

4. Hufnagel, C. A., and Eastcott, H. G.: Homologous arterial grafts. Bull. Georgetown Univ. Med. Center, **4**:119-123, 1951.

5. Deterling, R. A., Jr., Parshley, M. S., and Blunt, J. W.: Critical study of present criteria governing selection and use of blood vessel grafts. Surgery, **33**:213-232, (Feb.) 1953.

6. Taber, R. E.: Arterial homografts. J. Iowa Med. Soc., **44**:472-473, (Oct.) 1954.

7. Dubost, C., Allary, M., and Oeconomos, N.: A propos du traitement des anévrysmes de l'aorte. Ablation de l'anévrysme. Rétablissement de la continuité par greffe d'aorte humaine conservée. Mém. Acad. Chir. Par., **77**:381-383, (Apr. 11-18) 1951.

8. DeBakey, M. E., and Cooley, D. A.: Surgical treatment of aneurysm of abdominal aorta by resection and restoration of continuity with homograft. Surg. Gynec. & Obst., **97**:257-266, (Sept.) 1953.

9. Estes, J. E.: Abdominal aortic aneurysm: study of 102 cases. Circulation, **2**:258-264, (Aug.) 1950.

10. Vorhees, A. B., Jr., Jaretzki, A., III, and Blakemore, A. H.: Use of tubes constructed from Vinyon "N" cloth in bridging arterial defects. Ann. Surg., **135**:332-336, (Mar.) 1952.

11. Shumaker, H. B., and King, H.: Use of plastic tubes as aortic substitutes in man. Surg. Gynec. & Obst., **99**:287-294, (Sept.) 1954.

12. Creech, O., Jr., DeBakey, M. E., Self, M., and Halpert, B.: Fate of heterologous arterial grafts; experimental study. Surgery, **36**:431-444, (Sept.) 1954.

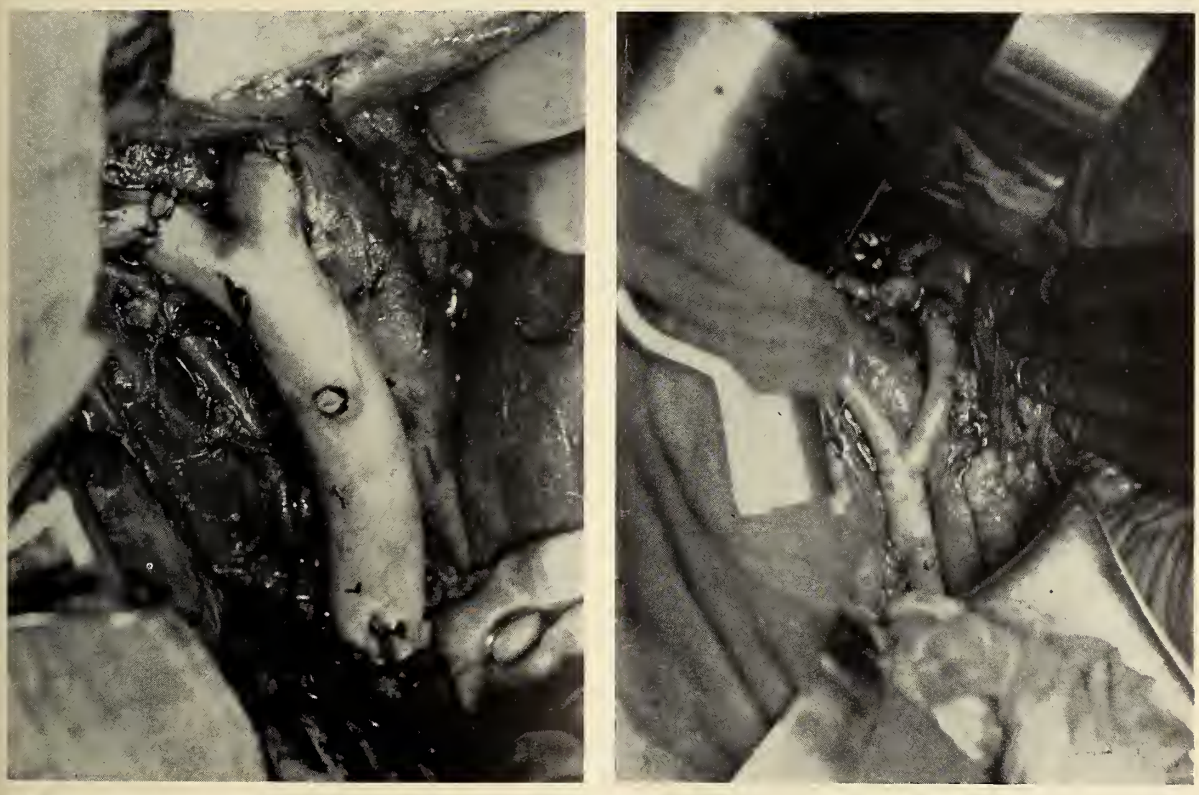


Figure 6. Aortic homografts in place after resection of terminal aorta. Left: "Serum-Tyrode's" graft in case No. 2 (R.N., VAH-8279). Right: Freeze-dried graft in case No. 6 (W.E., SUI-54-7576).

The Significance of
Pyuria in Children

C. W. LATCHEM, M.D.

DES MOINES

A GENERAL UROLOGIST soon learns that his practice is no longer synonymous with geriatrics. In approximately ten per cent of it, he deals with children 15 years old or younger. This entire segment of his practice is referred by general practitioners or pediatricians, and in about 50 per cent of the cases there has been a single finding: pyuria. The referring physicians, for the most part, are skeptical of the value of the various procedures that become necessary in the investigation of pus in the urine, and consequently are reluctant to recommend them to parents simply because of "a little pyelitis."

It is the purpose of this paper to show the value of such urologic studies by presenting a series of 365 consecutive children seen in my office (Table 1). The series was purposely unselected, for it seemed desirable to show, among other things, what percentage of the children were referred because pyuria had been diagnosed or because sufficient pus had been found in their urine to warrant investigation.

TABLE 1

COMPOSITION OF THE STUDY GROUP

Consecutive cases seen during the selected period	3,742	100 per cent
Adults	3,377	90.3
Children (204 males and 161 females)	365	9.7

It will be readily apparent that there is a rather high incidence of correctable pathologies accompanying pyuria in this age group. Table 2 shows that pyuria was not a definite factor in every one of these 365 children, and Table 3 provides a breakdown of the cases in which it had no part. But 195 children (54 per cent) were seen because of pyuria alone, or because pyuria was a factor in the symptomatology. Boys composed almost all of the group not having pyuria, for their lesions involved the external genitalia, where pyuria is not usually a factor. The girls outnumbered the boys two to one in the pyuria group, lending credibility to the myth that little girls are more susceptible to pyelitis because of a short urethra, dirty diapers, soilage, etc. The incidence of positive pathology, however, was about the same in the two groups. Since most of the findings were congenital anomalies, it is obvious why the majority of the patients are seen before they reach the age of five years, even though it is true that the upper age limit was 15.

TABLE 3

PYURIA NOT A FACTOR

Diagnosis	*Boys*	*Girls*
Extrophy of bladder	0	2
Gartner's duct cyst	0	1
Prolapse of urethra	0	1
Straddle injury to urethra	1	1
Enuresis	9	2
Congenital absence of kidney		1
Ureteropelvic obstruction	1	
Hypospadias	17	
Meatal stenosis	21	
Redundant prepuce	17	
Balanitis xerotica obliterans	7	
Hydrocele	12	
Renal injuries	5	
Obstruction due to sulfa	4	
Miscellaneous cases involving penis	22	
Undescended testicle	3	

In this group there were 132 patients, of whom 124 were boys and 8 were girls.

In Table 4 are presented most of the important findings or diagnoses in those cases where pyuria was a factor. In all of them, some measure of investigation was carried out, and in all but eight we made intravenous urograms in addition to the usual studies and cultures. Establishment of a diagnosis required cystoscopy and further retrograde studies in 145 cases. It is not surprising to find that Campbell's observation regarding the frequency of hydronephrosis among children is borne out here, for many of the congenital lesions are obstructive and by their very nature cause secondary hydronephrosis.

Cicatricial urethritis is common among females (70 cases in this series), and its being a cause

TABLE 2

	Boys		*Girls*		*Total*	
	Number	*Per Cent*	*Number*	*Per Cent*	*Number*	*Per Cent*
Without G-U disease					38	10.4
Pyuria	64	31% of 204 33% of 195	131	84% of 161 67% of 195	195	53.7
Pyuria not a factor	124	61% of 204 94% of 132	8	5% of 161 6% of 132	132	36.1

of pyuria is clearly demonstrated when, as is often the case, a previously ineffective antibiotic succeeds in clearing the infection after one has dilated the urethra during cystoscopy. That phenomenon occurred frequently in this series. A similar sequence of events frequently occurs in the treatment of males whose difficulty is a congenitally small urethral meatus or its inflammatory brother, balanitis xerotica obliterans. Pyuria associated with these two lesions has often responded to the same antibiotic that had been ineffective prior to meatotomy or, in some instances, dilatation. The importance of such a small lesion deserves to be stressed. For example, one of the males in our series, a two-year-old, was seen because of a urethral discharge and a complaint of burning on urination. Intravenous urograms revealed no more than dilatation of the upper urinary tract, and that finding was confirmed by cystoscopy and pyelography. The only discoverable pathology was a small urethral meatus, and presumably because meatotomy enlarged the opening at the time of cystoscopy, the child's urine was promptly cleared by the antibiotic that previously had failed, and it has remained clear ever since.

TABLE 4

PYURIA A FACTOR

(195 cases, of whom 64 were males and 131 females)

Diagnosis	*Boys*	*Girls*
Ureterocele	2*	5*
Duplication	4*	16*
Ureterocele with duplication	1*	4*
Extravesical orifice (ectopic)	1*	2*
Neurogenic bladder	6	6
Cicatricial urethritis		70
Congenitally small meatus	36	
Balanitis xerotica obliterans	10	
Ureteropelvic obstruction	4*	4*
Polycystic kidneys		1
Perinephritic abscess		1
Pseudohermaphrodite		1
Wilms tumor		3
Congenital ureteral stricture	1*	1*
Renal calculi	2	1
Ureteral calculus		1
Pyelonephritis with x-ray changes in kidney		5
Hydrocalyx	2	
Renal injury	1	
Stricture of urethra	2	
Urachal cyst	1	
Epididymitis	2	
Vesico-colic fistula	1*	
Hydroureters	1	
Obstruction of vesical neck	5	
Pyuria with either cystoscopy or x-ray changes	6	
Vesical-vaginal fistula		1

No pathology other than pyuria and positive cultures could be found in 40 cases, of whom 13 were males and 27 females. Secondary hydronephrosis complicated all of the cases marked with asterisks in the tabulation.

Four of the eight patients with ureteropelvic obstructions required surgical intervention. The oldest was nine years and the youngest seven weeks, and all of them were males. In two of them, pyuria played very little part in the symptomatology, but did contribute to the diagnosis. It is certain that the persistence of the pyuria led in most instances to more elaborate investigations than would ordinarily have been accorded an otherwise silent urologic lesion. Most of these cases came in with obscure abdominal complaints which appeared completely unrelated to the urinary system, and it was only when we had run down a seemingly insignificant urinary finding that we discovered the hydronephrosis.

Four of the patients having neurogenic bladder as an aftermath of poliomyelitis recovered following catheter drainage and sterilization of the urine, save for one who developed an abscess of the spine. That child still has some residual damage, but is able to manage by manual compression. I have yet to see a patient who, following uncomplicated poliomyelitis, has failed to make a complete recovery through these simple measures. The remaining neurogenic bladders were secondary to repaired meningomyeloceles, with the usual bowel and bladder dysfunction. Three have required transurethral resection to rid them of their residual urine.

Three of the five ureteroceles involved the upper segment of a duplicated kidney on one side, and in each instance the damage was so severe that heminephrectomy and ureterectomy were necessary. In the fourth case, the entire kidney had to be removed because of the unusual arrangement of the blood supply and the situation of the extra pelvis. Two have required transurethral incision of the sac, but one has cleared following medical treatment alone.

The two children with ureteral strictures had moderate hydronephrosis, with delay in emptying. One has required exploration and repair of the strictured area to clear the urine, but the other has responded to simple dilatation of the ureter from below. It is rather interesting that both of these children were thought at first to have appendicitis, but in view of the pus in their urine, intravenous urograms were performed and the urinary lesions were thus revealed. On exploration, the first case was found to have a dense thickening of the ureter, apparently due to an aberrant vessel crossing the ureter just above the iliac vessels.

The child with the vesico-colic fistula had been born with an imperforate anus and had had a colostomy, done elsewhere, shortly after birth. It wasn't until the pyuria was investigated, two years later, that the fistula was discovered, and it was then found that in addition to the fistula, he had a small, infected, atrophic non-functioning kidney on the left, and a badly dilated hydronephrotic one on the right. Resection of the lower loop of bowel and excision of the fistula have cleared up his pyuria to a marked degree. He continues to have some difficulty because of his rather severe permanent renal damage.

The boy with the urachal cyst had previously been operated on for an appendicitis in spite of

the presence of pyuria, and a midline mass had been found. Subsequent investigation revealed it to be a urachal cyst, excision of which has cleared up the pyuria. It is of interest that he had had no symptoms until he was 15 years of age.

In this series, there have been three children with extra-vesical orifices. In one of them, a male, the ureter ended in the left seminal vesicle. That child died shortly after admission to the hospital, despite the fact that the hugely dilated mass had been decompressed by ureterostomy. Autopsy showed that hydronephrosis resulting from the mass had been the cause of death. The remaining two of these three patients were girls. One had complete bilateral duplication of the kidneys, with the ureter to the upper segment on the left hand side ending just outside the urethral opening above the vagina. The other had an ectopic orifice on the right hand side from a single right kidney that ended in the urethra just inside the urethral meatus. Both the upper segment of the duplication in the first child and the right kidney in the other one were badly dilated and hopelessly damaged. The child with the duplication required a left heminephrectomy, the dilated upper segment and the ureter being removed. The other had to have removal of the entire right kidney and ureter. The left kidney was normal. Both youngsters have been symptom-free since their surgery.

There were 20 cases of either complete or incomplete duplication of the ureter, 4 in boys and 16 in girls. Some of these have been described previously, under other headings. Following investigation and antibiotic therapy, most of them have responded very nicely. Getting rid of hydronephrosis has required segmental resection of a part of the duplication in one or two of them, but since treatment their urine has remained negative.

In the foregoing paragraphs, I have emphasized a few of the more interesting of these conditions to point out the significance of even minimal pyuria in the absence of typical urologic symptoms and to stress the importance of investigating this one finding. Many children, particularly the very young, do not react like adults who are afflicted with the same sort of urologic lesion. Commonly they are fretful, they have fever, and they either complain of abdominal pain or hold their genitalia during urination. It is only by complete investigation of the finding of pyuria that one can identify the true nature of the lesion.

Excepting the cystoscopies and dilatations of the urethra, there were 46 cases that were found to require some surgical procedure (Table 5). Three refused surgery, and one was considered too poor a risk. The procedures carried out in the remaining 42 cases are listed here so that the reader may see what was done to eliminate pyuria by surgical means. Of those children whose pyuria could not be cleared up through the surgical repair of the lesions, or whose pyelonephritis was apparently without cause, it was noted that a small percentage had histories of recurrent upper respiratory infections, sore throats, ear infections or disorders of the bowel which were followed by urinary-tract infections. Most of these were treated with an appropriate antibiotic, and it usually cleared the urine. Approximately 20 per cent of this group have had recurrences, despite the fact that the cultures following therapy were negative.

TABLE 5

OPERATIONS INDICATED WHERE PYURIA WAS A FACTOR

	Boys	*Girls*	*Total*
MAJOR			
Pelvioplasty	3		3
Heminephrectomy	2	3	5
Nephrectomy	1	3	4
Nephrectomy for Wilms tumor		3	3
Incision of ureterocele transurethrally		3	3
Excision of ureterocele, suprapubic	1		1
Suprapubic cystotomy	1		1
Nephrostomy	1		1
Intubated ureterostomy	1		1
Ureterostomy	1		1
Transurethral resection	1	3	4
Repair of vesicovaginal fistula		1	1
Pelviolithotomy	1		1
Excision of vesico-colic fistula, colostomy & excision of lower loop	1		1
Drainage of perinephric abscess		1	1
Excision of urachal cyst	1		1
MINOR			
Meatotomy	10		10
Dilatation of ureter		1	1
Cystoscopy	43	102	145
Dilatation of urethra	1	70	71
Dilatation of meatus	6		6

In four of the cases, major surgery was indicated but not performed.

A few of them have been reinvestigated, but no pathology has been found to account for the recurrences. Among those given surgical attention and subsequent antibiotic therapy, the recurrences have been less numerous. So far, only five repeaters have been found in this group, and three of them are free of pyuria and symptoms at present.

From the beginning, it has been apparent that

TABLE 6

	Boys		*Girls*	
	Number	*Per Cent*	*Number*	*Per Cent*
Positive pathology	51	79% of 64 26% of 195	104	79% of 131 53% of 195
Surgery indicated*	27	52% of 51 13% of 204	17	16% of 104 11% of 161

This table indicates that the incidence of positive pathology was about the same in both pyuria groups (79 per cent), but that 52 per cent of the boys required surgery, as contrasted with only 16 per cent of the girls with positive pathology.

For the entire group, each individual had about the same chance of requiring surgery.

* Excepting cystoscopy and dilatation.

there is little sex differential in the incidence of pathology (Table 6). Among the 64 males with pyuria, 51 (79 per cent) were found to have positive pathology. The proportion was identical in the corresponding group of girls. However, even though the incidence for positive pathology was the same, percentage-wise, more than 50 per cent of the boys required surgery, as contrasted with only 16 per cent of the girls in whom there were positive findings. The figure represented by the latter percentage does not include the large number of little girls whose pyuria responded after simple dilatation of the urethra, and in whom no pathology could be demonstrated other than urethritis. There were 70 such cases among the girls and 3 among the boys. Whether the urethral lesion causes or follows an initial lower urinary tract infection, it is difficult to be certain. It apparently plays some part in keeping the infection alive and seems to respond to dilatation.

When one considers the group of 195 cases in whom the initial finding of pyuria was investigated, one is impressed with the wide variety of lesions, mostly congenital, that are to be found in this age group, and the equally large percentage that seem to require some sort of surgery. This apparent high rate of pathology makes it imperative that general practitioners and pediatricians become aware that investigation is advisable, even though it may require elaborate procedures, including anesthesia. In virtually all cases, something can be done to bring about improvement, and frequently, through prompt attention, a potential case of chronic pyelonephritis can be eradicated.

SUMMARY

A series of 365 consecutive, unselected children have been presented as evidence that better than 50 per cent of a urologist's pediatric practice is sent to him because of pyuria. A wide variety of pathologic lesions, mostly congenital, were discovered and required surgery. It may be said that each little boy who was referred to the urologist because of pus in his urine had three chances out of four of having something seriously wrong with him, and, if he did have something of that sort, there was a 50-50 chance of its requiring surgical repair. The typical little girl's outlook was not quite so serious. Excluding urethritis, she had about one chance in four of having something serious the matter with her, and, if she did, there was no more than one chance in ten that it would necessitate surgery.

Medical Aspects of

Intractable Ascites

PAUL FROM, M.D.

DES MOINES

Ascites is an abnormal accumulation of fluid in the peritoneal cavity. It can be an exudate or a transudate, although more commonly the latter, and it has approximately the same chemical characteristics as serum. A transudate usually has a specific gravity below 1.018, has less than 2 per cent albumin, and will not clot spontaneously.

In general, ascites may be associated with

1. Peritoneal inflammation
2. Neoplastic implants
3. Malnutrition
4. Nephrotic syndrome
5. Cardiac failure
6. Portal obstruction and Banti's syndrome

Dr. From is a member of the Department of Internal Medicine at the Veterans Administration Hospital in Des Moines. His paper is sponsored by the Veterans Administration with the approval of the Chief Medical Director. Statements and conclusions by the author are a result of his own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

MECHANISMS OF FORMATION

Peritoneal inflammation and neoplastic implants are obviously associated with fluid formation as a result of irritation or as a protective influence.

In malnutrition, the cause is thought to be hypoalbuminemia, and thus a lowering of the osmotic pressure within the intravascular extracellular compartment.

The nephrotic syndrome is associated with ascites mainly by this mechanism of hypoalbuminemia. In this case, too, as water is deposited in the tissue spaces, salt is carried with it, and the sodium tends to hold the water in the tissues. Because of the fluid's being deposited in the tissues, there is less total urinary output, and thus less salt output. There also are other factors which should be considered. In certain renal diseases, there is an abnormality of salt excretion, and there may be a relationship among kidneys, liver and adrenal cortex.

It is thought that the critical levels for a change in osmotic pressure great enough to lead to fluid deposition in the tissues or serous cavities are a total protein of 5 Gm. per cent and albumin of 2 Gm. per cent or lower.

Ascites in right-sided heart failure is due fundamentally to an increase in venous pressure. The normal venous pressure is probably not greater than 8-15 cm. H_2O (antecubital). In right heart failure there frequently is an increase to 20-30 cm. H_2O. Thus, the capillary pressure must be increased, and fluid tends to filter out of the vessels. Because of depressed cardiac output, there is an inadequate supply of blood to the tissues, metabolism is disturbed and the electrolytes and metabolites accumulate in tissue spaces rather than being rapidly removed. Local osmotic pressure then rises, and fluid is retained in the interstitial spaces. In the ascitic formation, there is possibly some increased capillary permeability present, for ascitic fluid in congestive failure contains 2-3 per cent protein, as compared with less than 0.5 per cent in edema fluid. However, dependent edema is much more common than ascites in heart failure because in the dependent position the effects of gravity tend to increase venous pressure, making it possible for more edema to accumulate.

There are other mechanisms in the formation of edema and ascites in heart failure. Because of reduced renal blood flow, the glomerular filtration rate is decreased. Renal plasma flow may decrease to 20-30 per cent of normal, and glomerular filtrate volume to 30-50 per cent of normal. In a small measure a reduced excretion of sodium may result. It is known that in congestive failure a patient may excrete only as little as 1 per cent of the normal amount of sodium, and this mechanism is not adequate to explain the marked sodium retention. There also is evidence of a primary derangement of tubular function in this condition, so that excessive tubular resorption of sodium occurs, perhaps secondary to excess adrenal cortical mineraloid activity. The result of excessive sodium and water retention is a further increase in venous pressure due to the hypervolemia. Recently the anti-diuretic hormone of the posterior pituitary has been implicated in the production of cardiac edema. (These mechanisms will be discussed at greater length later.) Cardiac ascites is especially prominent in heart failure associated with constrictive pericarditis or tricuspid stenosis and/or insufficiency. In both these conditions, hepatic congestion is intense, and so-called cardiac cirrhosis, if there is such an entity, is not uncommon. Thus it is possible that portal hypertension is a determining factor in the occurrence and prominence of cardiac ascites.

Ascites can occur in portal obstruction. In animals it is known that if a ligature is placed about one branch of the portal vein, atrophy will occur in the area of the liver which is made ischemic, and the unaffected lobes will undergo compensatory hypertrophy. If a ligature is placed about the main protal vein, marked atrophy of the liver will occur. If a portion of that liver is then excised, no regeneration in the remaining tissue will take place.

Thrombosis of the portal vein or of one of its branches can occur clinically.

Obstruction to the portal flow is a common initial result of serious injury (hepatitis) owing to the edema of the cells. Later, when hepatic cells die, they are replaced by fibrous tissue which contracts and obliterates the contained blood vessels, and the more extensive the fibrosed area, the more severe is the resulting interference with the portal venous flow.

ANATOMY OF HEPATIC CIRCULATION

Before going further into this question, we should undertake a brief review of the anatomy of the hepatic circulation. The portal vein collects blood from the gastrointestinal tract, spleen and gallbladder. The portal vein pressure is normally 15-22 cm. H_2O, which is higher than the normal peripheral venous pressure.

Blood flows from the portal vein to interlobular veins, then to the hepatic sinusoid and into the central vein, then through sublobular veins. and through the hepatic vein. It finally empties into the inferior vena cava. The presence of a hepatic sphincter has been postulated. (This is a well developed muscular coat of the hepatic vein near its entrance into the vena cava. Constriction could impede blood flow from the liver and thus raise portal pressure. Its presence has been discovered in dogs, but not in human beings.)

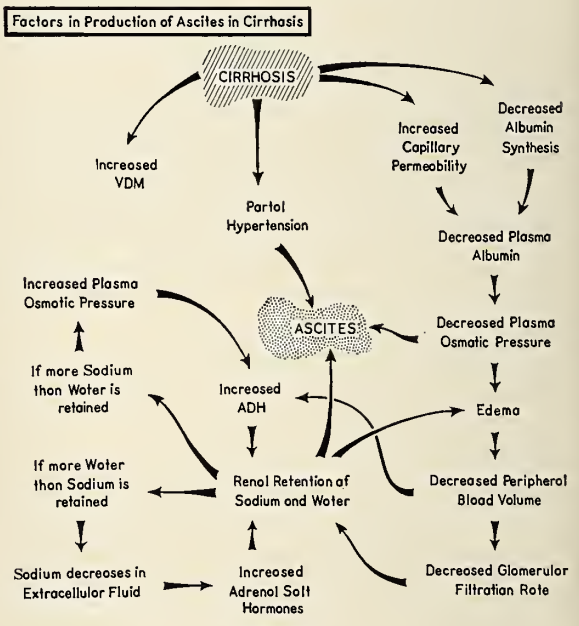


Figure 1

The hepatic artery supplies about 25 per cent of the blood to the liver, an arterial share of blood that is much less than that of most other organs. However, most of the O_2 of the liver is supplied through the hepatic artery.

Lymphatic vessels are also present in the liver.

OBSTRUCTION AND ITS CONSEQUENCES

What happens in cirrhosis to cause obstruction to the portal blood flow? As intimated, the proliferated fibrous tissue contracts against these subdivisions and obstructs the blood flow. Hans Popper has recently reported that cirrhotic livers may get into further difficulty by developing internal Eck fistulae (Eck fistula: anastomosis of portal vein to inferior vena cava, with ligation of portal vein between site of anastomosis and liver). He has demonstrated anastomoses in the septa between the portal and hepatic veins, and a lesser number between the portal vein and the hepatic artery. In effect, these shut off blood supply to the parenchyma by setting up the shunt, and further parenchymal damage ensues. He suggests that in all types of cirrhosis, when these shunts have occurred, the process is irreparable. The shunts can add to portal hypertension by transmission of arterial pressure (from the hepatic artery) into the portal network.

When portal vein blood is obstructed, various collateral routes are utilized. These are the esophageal veins, coronary vein of the stomach, the superior hemorrhoidal branch of the inferior mesenteric vein, the middle and inferior branches of the internal iliac veins, the superior and inferior epigastric veins through the para-umbilical vein of Sappy, and the portal vein to the inferior vena cava through the retroperitoneal veins of Retzius.

As has been stated, normal portal vein pressure is 14-22 cm. H_2O. In cirrhosis, this pressure may rise to as much as 40 cm. H_2O. This increase leads to a corresponding rise in capillary blood pressure in the abdominal viscera, causing an excessive outflow of fluid into the peritoneal cavity.

Because these cirrhotic livers are damaged, there is decreased albumin synthesis, resulting in a hypoalbuminemia. The plasma osmotic pressure falls, and fluid loss is facilitated. There may actually be an increased capillary permeability, contributing further albumin loss from the plasma and leading to more ascites. Ascites can occur on this basis alone, even without much elevation of portal pressure.

In some cirrhotics, other factors also seem to help in the development of ascites. It is an old idea that largeness of the liver itself can lead to ascites simply by that organ's exerting pressure on the inferior vena cava. In some cases, importance seems to be attached to an anti-diuretic hormone, for one has been recovered from the urine of cirrhotics. It is not known whether an excess of it is present in the body because of release from the posterior pituitary through initial stimulation by increased osmotic pressure of the osmoreceptors in the plexus of the internal carotid artery, or because the damaged liver cannot inactivate the antidiuretic hormone (ADH) normally present. In either case, ADH stimulates the distal renal tubules to reabsorb water especially, but little salt. This water can thus lead to edema or ascites.

Vasodepressor material (VDM), produced in the liver and seen in experimental shock, is known to have an anti-diuretic effect. The kidney is also involved in another manner in some of these patients. It is known that cirrhotics in general excrete very little sodium. Their urinary, sweat and fecal loss of sodium is extremely low, perhaps because of increased adrenal cortical mineraloid activity. Thus, because the retention of water by ADH leads to an imbalance between sodium and water in the extracellular space, the adrenal cortex secretes more mineraloids, which in turn cause increased tubular resorption of sodium and chloride. The retention of salt by this mechanism then leads secondarily to the retention of water. The retention of salt also increases plasma osmotic pressure and leads to osmoreceptor stimulation, with further elaboration of ADH. In some cirrhotics there also is a decreased glomerular filtration rate which could cause retention of sodium and water. The decrease in glomerular filtration would of course make less water and salt available for excretion from the body through the kidneys. Poor circulation in some cirrhotics is evidenced by cold extremities, hypotension and dehydration.

There is yet one other possible mechanism in the production of ascites. A decrease in diuresis exists in the sitting, as contrasted with the recumbent, patient. This phenomenon can be explained by means of the volume receptor theory. If cerebral blood flow and extracellular fluid to the brain decrease, then volume receptors are stimulated so that ADH is produced. Water is thus retained in quantities out of proportion to those of salt, and extracellular fluid is increased.

Physiologists have maintained for some time that ascites can be induced by a diet rich in meat, and that the fluid will be absorbed when meat is excluded from the diet. The noxious agent is not in the protein content of the meat, for protein-free meat extracts are even more effective in producing ascites than is an equivalent amount of whole meat.

THERAPY

It is clear that if the fluid is due to neoplasm, the problem may be handled in the majority of cases by paracentesis.

If the cause is nutritional, then food—especially protein—is required. Bacterial causes should be

treated as such, with antibiotics and any necessary surgery.

The nephrotic type is quite a problem, but therapy in the main is aimed at elevating the level of plasma protein. Albumin administered intravenously may reduce the ascites. Diuretics, especially urea, may be used. A course of nitrogen mustard or an attack of measles occasionally will induce a remission.

Edema in cardiac failure is treated by increasing the efficiency of the myocardium, as well as by certain adjunctive procedures.

In cirrhosis, many approaches are possible and often are rewarding. Bed rest is necessary. Hepatic blood flow is increased when the patient maintains a recumbent position. The diet should be rich in protein, and possibly meat-free protein. The argument raised against a high-protein, high-caloric diet is that possibly an already damaged liver cannot make use of all the proteins presented to it. Nevertheless, the accepted diet is high in protein, calories and carbohydrate. Ample vitamins, including K, should be present in the regimen, for increased needs for vitamins have been demonstrated in liver disease. All known hepatotoxins, including barbiturates, must be avoided if one is to prevent any further liver damage. The appetite can be stimulated with B_{12}, cortisone, crude liver extract or insulin. Cortisone also has the effect of increasing hepatic blood flow about 40 per cent while it is being given, and this increase may contribute to the repair of the liver.

The diet should be low in sodium, for since these cirrhotics do not excrete salt, they need little in the diet. One or two grams of salt (400-800 mg. sodium) can be considered adequate, and by the imposition of such a limit one can help to reverse some of the factors that have been discussed. Ion-exchange resins may be used if the low salt diet interferes with the patient's appetite. Paracentesis may be indicated. This procedure is occasionally followed by the low-salt syndrome. Intravenous administration of human albumin in the salt-poor form is expensive, but occasionally it is of value. Since each 5 Gm. of albumin is the osmotic equivalent of 100 ml. of plasma, 5 Gm. in a 20 ml. solution of dextrose will draw approximately 70 ml. of additional fluid into the circulation within 15 minutes. If the albumin is not lost from the body via the kidneys, the albumin level of the plasma can actually be raised over a number of days. Mercurial and nonmercurial diuretics, xanthines or urea may be given in an attempt to overcome the effects of salt and water retention.

Reportedly, intravenous liver extract has been beneficial occasionally, but is not without toxicity. The role of the lipotropic factors and the broad-spectrum antibiotics will not be discussed.

It was my good fortune recently to demonstrate the value of pursuing these physiologic concepts. A 42-year-old white male cirrhotic had first been seen at the Des Moines V.A. Hospital on November 8, 1952, for ascites associated with portal cirrhosis. During the next nine months many aspirations were performed, and 158,600 ml. fluid was aspirated from the abdomen and 1,800 ml. from the right thorax. Therapy also had consisted of various measures designed to stimulate diuresis, and during that time his weight fell from 375 to 234 pounds. The ascites continued, and finally a portocaval shunt procedure was attempted. At laparotomy, it was found that this procedure was not technically feasible. Because, upon careful study, it was found that the patient was losing 16 Gm. albumin per day into his abdominal cavity, he was given intravenous salt-poor albumin in a dosage of 12.5 to 25 Gm. per day. He was given 335 Gm. in a 19-day period, and none of that albumin was recovered in the urine. Following this therapy, the patient lost 18 lbs., the ascites no longer recurred while he was in the hospital, and now (11 months later) there has been no recurrence. He is asymptomatic and is gainfully employed.

If the above discussed measures do not control the condition, a surgical attack should be made on the portal venous system in an attempt to reduce the portal hypertension.

CONCLUSION

In summary, the mechanisms of formation of ascites have been discussed, and the various mechanisms associated with diseases in which ascites is a prominent factor have been reviewed. The methods of present-day therapy of ascites have been presented in some detail. A case of ascites associated with portal cirrhosis that responded to physiological therapy has been presented.

REFERENCES

1. Danowski, T. S.: Electrolytes and congestive failure. Ann. Int. Med., 37:453-464, (Sept.) 1952.
2. Weisberg, Harry F.: Water, Electrolyte and Acid-base Balance. Baltimore, Williams & Wilkins Co., 1953.
3. Wright, Samson, *et al.*: Applied Physiology, 9th. ed. New York, Oxford University Press, 1952.
4. Friedberg, Charles K.: Diseases of the Heart. Philadelphia, W. B. Saunders Company, 1949.
5. Popper, H., Elias, H., and Petty, D. E.: Vascular pattern of the cirrhotic liver. Am. J. Clin. Path., 22:717-729, (Aug.) 1952.

INTERNATIONAL COLLEGE OF SURGEONS

The Eastern Division regional meeting of the International College of Surgeons is to take place at the Chatham Bars Inn, on Cape Cod, July 1-4. Papers and panel discussions will deal with gynecology, urology, plastic surgery, gastrointestinal surgery, biliary tract surgery, cryptorchidism, orthopedic surgery, rectal surgery and radiology. The entire inn and all of its facilities have been reserved for the weekend, and a varied program of recreation has been planned for physicians and their families. Reservations should be made through the Beacon Travel Service, 145 Tremont Street, Boston 11.

Endometriosis: Newer Concepts

AUSTIN E. SCHILL, M.D.

DES MOINES

My purpose is to bring out the latest developments in the search for an answer to an age old problem. Endometriosis, by definition, is the occurrence of endometrial tissue outside the limits of the mucosal lining of the uterus. In 1921, the publication of Sampson's classic articles on the subject instigated an investigation, particularly of the pathogenesis of the disease. We are all sure of the clinical importance of endometriosis as a cause of disability in the female, but as to the etiology and treatment, we are still in the "many theory" stage.

PATHOGENESIS

Endometriosis is of two types: (1) the direct, in which the ectopic mucosa is continuous with the mucosal lining of the uterus, and (2) the indirect, wherein the ectopic mucosa has the same histologic structure as the direct, but is not continuous with usually situated müllerian mucosa. Many investigators believe that external endometriosis and internal endometriosis may well be two separate entities.

There are several theories as to the origin of external or indirect endometriosis:

1. Sampson's idea is that the backflow of menstrual blood and endometrial particles implant and grow on the ovary. Recently, Telinde and Scott have advanced experimental evidence in support of that theory. They were able to produce pelvic endometriosis in certain monkeys by means of surgery which caused the monkeys to menstruate into their own pelvic cavities.

2. According to the embryonic or fetal-rest theory, these glands originate from the cell rests of the müllerian duct.

3. Lymphatic and vascular spread may occur at the time of menstruation.

4. Meigs advocates the theory that metaplasia of the epithelium of the pelvic peritoneum takes place, and that the stimulus for the metaplasia is furnished by prolonged menstruation uninterrupted by pregnancy.

5. A newer concept brought out by King, the epigenetic hypothesis, hasn't been intended to cover every aspect of the phenomenon. King limits his thinking mainly to the umbilical region, for it is there that he has made his studies. He states that the condition develops from cells in locations other than the peritoneum.

The clinical history and observation show that the condition develops in a previously normal structure. Bleeding from the umbilicus, when it occurs, develops early—that is to say, as soon as a disturbance attracts attention to the area. Thus, it seems that the glands from which the hemorrhage comes communicate with the surface at this early stage.

Sections of the lesion, when viewed macroscopically, demonstrate that it lies immediately under the skin and that the tissue is glandular and definitely of the endometrial type.

King postulates that the endometrial glands actually develop in the skin. He brings out the point that estrogenic hormones affect the skin, and it appears that they affect the per-umbilical skin by increasing the formation of sudoriferous glands, but that the tissue of the umbilical fossa itself is affected differently, and gives rise to endometrial tissue.

PATHOLOGY

The pathology of endometriosis is the result of the growth and activity of endometrial glands which have the same histologic structure and function as the glands of the uterine mucosa.

Endometriosis of the cervix and vagina are thought to occur by direct implantation from menstrual flow.

In these misplaced glands, ovarian hormone stimulation causes cyclic bleeding and, with no avenue of escape, the blood accumulates as pelvic hematomata of varying size. Occasionally, these hematomata progress to large blood cysts which rupture and spill black, tarry fluid into the pelvis. Secondary implants may form if the fluid contains viable endometrial tissue.

Most frequently, endometriosis is associated with the ovary. However, it is also found in the utero-sacral ligaments, rectovaginal septum, uterovesical septum, broad ligaments, umbilicus, cervix, vagina, lungs and arms.

INCIDENCE

Once considered a pathologic curiosity, endometriosis is today a major gynecologic problem. Regardless of age, any woman with ovarian activity is a potential victim. Failure of conception, for economic reasons, during the early years of marriage, maladjustment and the increased tension of modern living, all of which are causes of unsatisfactory sex life for many patients, have been mentioned as contributing factors in the development of endometriosis. It has been found more frequently in private than in ward patients. Sampson found endometriosis in 21.8 per cent,

This paper was read before the Medical Study Club of Des Moines, on January 3, 1955.

Holmes in 22.6 per cent and Meigs in 32.2 per cent of all abdominal gynecologic operations. Thus, we can expect this condition to be present in one out of every four females operated on for a pelvic pathology. One must emphasize that the variable clinical manifestations of the disease and its widespread locations demonstrate the necessity for our constantly bearing endometriosis in mind when observing patients of childbearing age.

SYMPTOMATOLOGY

It is generally considered that the cardinal symptoms of this disease are (1) dysmenorrhea, (2) dyspareunia, (3) relative sterility, (4) defecation pain during menstruation, and (5) a hard, fixed nodule discernible on palpation in the utero-sacral ligaments or in the peritoneum of the cul-de-sac.

In addition to the above, other symptoms frequently presented by these patients include menorrhagia, metrorrhagia, pelvic pressure, gastrointestinal symptoms, constipation, elevation of temperature and leukocytosis.

Sterility is a common symptom or complication of endometriosis. Many observers state that the incidence is between 20 and 60 per cent. Whether the figure is high or low seems to depend on whether private patients or ward ones are bases of the estimate.

Recently, Scott published two papers on the effect of endometriosis on pregnancy. He presented two cases of endometriosis in which rupture of the uterus necessitated laparotomy during pregnancy.

TREATMENT

Prophylaxis through early marriage and frequent childbearing undoubtedly is the ideal answer to the problem, for it is obvious, first, that endometriosis has a very definite effect on fertility and that it is more common in women who do not bear children than in those who do. But, since the psychology and mores of our patients prevent our accomplishing much of anything of a preventative sort, we must confine ourselves to attempts at managing the difficulty after it has occurred.

Physicians should avoid uterine manipulation or surgery near or at the time of the menses. Such procedures as tubal insufflation, hysterosalpingography and the like should never be done near the time of the menstrual period.

Actual treatment can be broken down into medical, surgical and roentgen therapy. A great deal has been written of late about the medical treatment of endometriosis, but as you will see, it is not the answer.

Many men advise stilbesterol in increasing amounts, and claim excellent results. There is no doubt that a change in the lesion occurs in many cases under such treatment. The areas seem to become smaller and, with suppression of menstruation by this means, the patient is made more comfortable. However, after treatment is stopped, the endometriomas return in a very short time to just where they were. Also, after successfully relieving a patient for, let us say, six months, it is very distressing to have a chocolate cyst break down, become necrotic and cause a serious sterile pelvic inflammation. Serious uterine hemorrhage may follow stilbesterol treatment. If the lesion is minimal and if childbearing is no factor, one can doubtless keep the disease under control by interfering with the pituitary gland and preventing ovulation. But it is not likely, except in patients near the menopause and in those who go through it during or shortly after treament, that stilbesterol will completely eradicate the lesion.

There are those who advocate the use of testosterone in this condition. And it follows that as long as it counteracts estrogen, uterine function will fail to occur. But when it is stopped, the normal pituitary-ovarian-uterine cycle will be resumed. Also, the possibility of hirsutism and voice changes must be reckoned with, and these do not regress on cessation of the drug.

For years, the treatment of endometriosis by the inexperienced has been castration. This procedure should be reserved for women near the menopause and for those who have very extensive lesions. To castrate young women who may want children is an unnecessarily drastic procedure. At times, a portion of the bowel can be resected, or the bladder may have to be excised. If the rectovaginal septum is involved in a painful endometriosis, the area should be excised. At any age, except if the patient is in menopause, one should try to preserve ovarian tissue if possible, for castration produces changes in face, hair, bones and disposition, and causes atrophy of the mucous membranes of the vagina.

In patients of childbearing age, most men are in agreement that every attempt should be made to preserve the whole genital system, gambling on the conservative side even if the disease is extensive. Any surgeon can castrate women, but it takes great skill and courage to treat endometriosis surgically and yet preserve as much of genital system as possible. It must be remembered that the reward for preserving childbearing function is great, and the assurance to a woman that after surgery she will still be attractive and satisfactory to her husband and to herself is even greater.

Roentgen ray treatment should be reserved for those women in whom conservative treatment has failed, and in whom a recurrence of pain or of bowel or bladder symptoms suggests further involvement.

SUMMARY AND CONCLUSIONS

1. Endometriosis is one of the most frequent causes of pelvic disease in the younger women of childbearing age.

2. The pathogenesis, pathology, incidence, symptomatology and treatment have been briefly reviewed.

3. Conservative surgical treatment, with preservation of the childbearing function in young women is advocated whenever possible.

4. Hormonal therapy of endometriosis is only palliative, not curative.

BIBLIOGRAPHY

1. Sampson, J. A.: Perforating hemorrhagic (chocolate) cysts of the ovary, their importance and especially their relation to pelvic adenomas of endometrial type. Arch. Surg., 3:245, (Sept.) 1921.

2. Schmitz, H. E., and Towne, J. E.: Treatment of pelvic endometriosis. Am. J. Obstet. & Gynec., 55:583-590, (Apr.) 1948.

3. Karnaky, K. J.: Use of stilbesterol for endometriosis; preliminary report. Southern M.J., 41:1109-1111, (Dec.) 1948.

4. Meigs, J. V.: Endometriosis: etiologic role of marriage age and parity; conservative treatment. Obstet. & Gynec., 2:46-53, (July) 1953.

5. Scott, R. B.: Malignant changes in endometriosis. Obstet. & Gynec., 2:283-289, (Sept.) 1953.

6. Bennet, E. T.: Endometriosis in the older age group. Am. J. Obstet. & Gynec., 65:100-108, (Jan.) 1953.

7. King, E. S. J.: Endometriosis of the umbilicus. J. Path. & Bact., 67:575-585, (Apr.) 1954.

8. Duson, C. K., and Zelenik, J. S.: Vulvar endometriosis: apparently produced by menstrual blood. Obstet. & Gynec., 3:76-79, (Jan.) 1954.

9. Rencoret, R., and Vargas, L.: Persistent, obstructive and recurrent intestinal endometriosis: regression by prolonged treatment with testosterone; report of a case. Obstet. & Gynec., 4:142-146, (Aug.) 1954.

10. Groseclose, E. S.: Clinical significance of endometriosis. Virginia M. Month., 81:253-258, (June) 1954.

State University of Iowa College of Medicine

Clinical Pathologic Conference

March 2, 1955

SUMMARY OF CLINICAL FINDINGS

A 39-YEAR-OLD WHITE woman was admitted to University Hospitals because of recurring headaches over a period of two years. Her medical history revealed that she had had an appendectomy at age 27, and a hysterectomy for uterine fibroids and a thyroidectomy for nontoxic goiter at age 37. Her general health had otherwise been good.

About two years before admission, the patient began to have headaches lasting from a few minutes to several hours, gradually increasing in severity and frequency. The headaches were characterized by sudden onset, often associated with suddenly turning her head or sitting up. During the preceding six months, the headaches had become more frequent, occurring several times a day. Six months before her admission here she had been admitted to another hospital for study. Following a lumbar puncture, she was reported to have had "a severe reaction" with prolonged headache and nausea. During the next five and a half months the patient was seen on numerous occasions by members of the staff of University Hospitals, both as an out-patient and, once, as a hospital patient.

The patient's headaches were found to be associated with an elevated blood pressure, for during her periods of pain it ranged from 150/100 to 240/135 mm. Hg., as against 135/80-74 mm. Hg. during the intervals when she was free from symptoms. A severe attack of headache and elevation of the blood pressure could be provoked at will if one had the patient sit up in bed and bend forward, or if one massaged her upper abdomen deeply. On the other hand, if the patient was tilted from the supine to the standing position, these changes did not occur. Massage of the right carotid body produced a drop in blood pressure from 160/110 to 115/80 mm. Hg., and of the left carotid body to 140/90 mm. Hg. An ophthalmologist reported the presence of spastic and narrowed arteries. Examination in the Otolaryngology Department revealed no evidence of disease of the ear, nose or throat. A subcutaneous injection of histamine did not produce a headache.

Following the thyroidectomy two years before admission, the patient had been placed on increasing doses of thyroid extract because of her headaches and fatigue state. The thyroid medication, consisting of 4 grains of thyroid, was discontinued, and after a lapse of several weeks, radioactive iodine uptake studies, basal metabolic rate measurement and a protein-bound iodine determination were completed, all of which were found to be within normal limits.

In the two months before admission to the hospital, the patient was confined to bed because of the severity of her headaches precipitated by motion. She lost 20 pounds of weight and occasionally was nauseated. Once in a while, during the acute phase of a headache, she was found to be mentally confused. The patient was readmitted to University Hospitals for further study. The physical examination then revealed a well developed, well nourished woman who appeared chronically ill. Her skin was normal; her head revealed no masses or tenderness; her eyes were not remarkable. The pupils were 4/4 mm. The light reaction, accommodation reaction and gross visual fields were 100 per cent. There was no nystagmus. The

funduscopic examination revealed normal optic discs, narrowing and spasticity of the arteries and an absence of hemorrhage or exudates. The function of the cranial nerves was judged to be normal. The neck was not stiff. No masses or goiter were palpable in the cervical region. The chest was normal. The heart presented no abnormal signs. The blood pressure was 155/100 mm. Hg. The aortic second sound was slightly louder than the pulmonic second sound. No masses were found on palpation of the abdomen. The pelvic and rectal examinations were normal. The reflexes were: biceps jerk 2/2, triceps jerk 2/2, knee jerk 2/2, ankle jerk 1/1, and plantar stimulation produced flexion bilaterally. The sensations were intact throughout. There was no tremor or ataxia.

The red blood count was 4.5 million cells per cu. mm. The white blood count was 8,700 cells per cu. mm., and the differential count was normal. The urine was negative for albumin, blood and sugar. The microscopic examination was normal. The urine concentrated to a specific gravity of 1.021. The chest film was normal. The electrocardiogram was normal. The serologic tests for syphilis were negative. The blood urea nitrogen was 12 mg. per 100 ml., and the creatinine was 1.0 mg. The total proteins were 6.7 Gr. per 100 ml., with a normal albuminglobulin ratio. The 24-hour urine analysis for porphyrins was negative. The renal plasma flow was 367 cc./min., glomerular filtration rate 85.6 cc./min., and tubular maximum 54.5 mg./min. The spinal fluid pressure was 180 mm. H_2O. The spinal fluid proteins were 23 mg., and the chlorides 730 mg. per 100 ml. Intravenous pyelograms showed normal function. There was a questionable fleck of calcium above the right kidney. Perirenal air injection showed no abnormalities. A benzodioxane test was negative. The base line of 170/110 mm. Hg. was maintained throughout the study. Following an intravenous injection of 400 mg. of tetraethylammonium chloride, there was a sudden drop of the blood pressure from 140/88 to 60/0 mm. Hg., at which time the patient became unconscious and developed a tremor of the left hand. The capillary pulse of the nail beds was visible. The skin was red and warm. Following this, the blood pressure rose to 250/120 and fell to 120/80 mm. Hg. The patient regained consciousness and suffered only a temporary blurring of vision. A flame-shaped hemorrhage was noted in the right eyeground the next day. The optic discs were normal.

Neurologic examination revealed no changes in the reflexes, sensations, or function of the cranial nerves. No tremor, ataxia or nystagmus was noted.

Over a period of two weeks, the patient was observed to have "good days" and "bad days." It appeared, however, that there was a gradual deterioration, with more frequent bouts of severe headaches and hypertension accompanied by mental confusion, sweating of the hands, nausea and occasional vomiting. On the other hand, there were periods when she had a blood pressure of 135/80 mm. Hg. and felt quite well.

An operation was performed, and tissue obtained from the patient was submitted to the Department of Pathology for study.

CLINICAL DISCUSSION

Dr. Henry E. Hamilton, Medicine: I suspect that you have read this protocol and have come up with some idea as to what type of operation might have been performed on this patient and what sort of tissue might have been removed and sent to the pathologist. Dr. Lubin will discuss this protocol as a clinical exercise.

Dr. Robert I. Lubin, Medicine: If you will bear with me, I am going to present this case as we would consider it clinically.

The difference in the blood pressure readings between the patient's headache periods and normal periods makes it apparent that we are dealing with cephalalgia associated with paroxysmal hypertension. The commonest conditions associated with paroxysmal hypertension are (1) eclampsia, (2) essential hypertension, (3) pheochromocytoma, (4) porphyria, (5) nephritis, (6) aortitis, (7) central nervous system disease, either traumatic or vascular, (8) tabes dorsalis, (9) hysteria, and (10) lead poisoning. I shall try to rule some of these out, and perhaps rule one of them in.

We have been told that a severe attack of headache and elevation of the blood presure in this patient could be provoked at will by having the patient sit up in bed and bend forward, or by massaging her upper abdomen deeply. On the other hand, if the patient were tilted from the supine to the standing position, these changes didn't take place. Now this may be a red herring, but certainly paroxysmal hypertension associated with change in position and certainly with massage of the upper abdomen is the classical type of hypertension seen in pheochromocytoma. Although called "classical," the paroxysmal form of hypertension is not, however, the usual form encountered in pheochromocytoma, for it is present in only about 30 per cent of the cases.

Massage of the right carotid body produced a drop in blood pressure from 160/110 to 115/80 mm. Hg., and of the left carotid body to 140/90 mm. Hg. As far as I am concerned that means no more than a positive carotid sinus reflex. As I am sure you are all aware, there are four major types: (1) that associated with the slowing of the pulse and resultant fall in blood pressure—the so-called vasovagal form; (2) the vasodepressor form where there is a fall in the pressure without bradycardia; (3) the central type of carotid sinus reflex; and (4) a mixture of the types that I have just enumerated. I feel that this carotid massage is of no significance in the differential diagnosis, or, at least, that it is of no help to me.

An ophthalmologist reported the presence of spastic and narrowed arteries. This also is not

especially meaningful, for it indicates no more than a mild hypertension of short duration.

The fact that an injection of histamine failed to produce a headache shouldn't be thought of as a contraindication of pheochromocytoma, inasmuch as it was merely subcutaneous. Undoubtedly that procedure tests for so-called Horton's histamine headache, but it sheds no light on the differential diagnosis.

The normal findings in the radioactive iodine uptake studies, basal metabolic measurements and protein-bound iodine determination are of importance, however, since hypermetabolism and hypertension, had they been found, would have been strong evidence in favor of a pheochromocytoma. Certainly hypermetabolism is much more common in pheochromocytoma with persistent hypertension than in that with paroxysmal hypertension. In one series of cases that I was able to review, 10 out of 11 patients with persistent hypertension associated with pheochromocytoma had hypermetabolism, whereas in 14 cases of paroxysmal hypertension associated with pheochromocytoma, only 3 had hypermetabolism. Then as regards thyroid function, we know that a pheochromocytoma may not only elevate the metabolic rate but may cause thyroid enlargement, it may increase the PBI, and the basal metabolic rate may respond to antithyroid medication. But the fact that the metabolic tests were normal, in my mind, does not rule out the possibility of a pheochromocytoma.

Progressing with our reading of the protocol, we note that once in a while during the acute phase of a headache, the patient was found to be mentally confused. Now certainly the presence of headache, confusion, abdominal symptoms and paroxysmal hypertension must suggest the possibility of porphyria. However, because there were no neurologic abnormalities and certainly because the test for porphyrins was normal, I think that we can rule out that possibility from the differential diagnosis. The eclampsia, I feel, can be ruled out, inasmuch as the patient had had a hysterectomy. That is one of the easy ones to delete.

The woman was readmitted to University Hospitals for further study, and the physical examination revealed no more than that she appeared chronically ill. The fact that her skin was judged normal doesn't help very much. In approximately 5 per cent of the cases of pheochromocytoma there is dermoneurofibromatosis, and in approximately 5 additional per cent there are other types of neurodermatitis. One's finding neurofibromatosis and hypertension would certainly lead to serious consideration of pheochromocytoma, but failure to do so doesn't constitute strong evidence against it.

Aortitis, I feel, is ruled out by the negative cardiovascular findings, with the exception of the high blood pressure, and by the negative serologic test for syphilis. Tabes dorsalis, I think, is eliminated by the rest of the report on the physical examination, by the negative neurologic findings and by the repeatedly normal spinal fluid tests; and central nervous system disease, either traumatic or vascular, is similarly contraindicated, though not ruled out completely.

I feel that the normal findings in the urinalysis are strong evidence against a glomerular nephritis causing paroxysmal hypertension. As regards the more refined tests of renal function, unless one is familiar with the normal figures, the findings aren't particularly meaningful. In reviewing Homer Smith's discussions of renal function, one finds that the average glomerular filtration rate in a normal woman is 108 plus or minus 13, with an average of 118.[1] Since in this patient it was 85.6, we can conclude that the filtration rate was decreased. As for renal plasma flow, the average normal is 600 ml./min., and this patient had 367. That too is decreased. In tubular mass, the normal is 77 mg./min., but this patient had 54. The filtration fraction, which is merely the ratio of the glomerular filtration to the renal plasma flow, is normally 0.2. However, in essential hypertension, one is apt to find an elevated filtration fraction, whereas in glomerular nephritis or pyelonephritis the filtration fraction should be reduced, therefore, less than 0.2. This patient's filtration fraction is .23, or in the range of essential hypertension or any other form of hypertension.

The normality of the intravenous pyelograms means merely that the patient hadn't enough intrinsic renal disease to distort them, didn't have enough nitrogen retention to prevent excretion of dye, or didn't have a large enough super-renal tumor mass to displace the renal calyces, thus causing distortion of the pyelograms. The X-ray diagnosis of pheochromocytoma is not very good, for the density of the tumor mass is much like that of a cyst and therefore does not stand out very well in a picture. An exceptional case can occasionally be seen as a dense shadow.

There was a questionable fleck of calcium above the right kidney. This may be a red herring too, but it seems to me that I recall there being some cases of calcification in pheochromocytoma. Of course, as most of you know, pheochromocytoma is commoner on the right side than on the left. Out of 139 cases in one report, 74 were on the right side, as opposed to 45 or 46 on the left. Whether this fleck of calcification means anything, I don't know. I certainly am not putting any weight on it. Peri-renal air injection, a classic test to delineate a super-renal mass, revealed no abnormalities. But its being normal doesn't rule out a pheochromocytoma.

Inasmuch as later there is a referral to the tetraethylammonium chloride, or Etamon, test, I think at this point that a few words might be said concerning the pharmacologic tests for pheochromocytoma. I think we can break them down into three groups. First are the provocative ones,

employed when the patient's blood pressure is less than 170/110. There are several substances used—histamine most frequently, I believe. It was first described by Roth and Kvale in 1945.[2] In this test .025 to .05 mg. of histamine base is injected intravenously in 0.5 cc. of saline, and if there is a pheochromocytoma, there will be a sharp rise in blood pressure of at least 50 mm. systolic and 25 mm. diastolic. This technic used to be compared with the cold pressor test, and it was supposed that the rise had to be at least 100 mm. greater than in the cold pressor test. This principle has been discarded, for in cases of essential hypertension the cold pressor test is highly erratic and, in addition, may precipitate a bout of paroxysmal hypertension in a patient with pheochromocytoma. A negative reaction to histamine would consist of a sudden drop and then a slight rise in blood pressure. There were six false negatives and many false positives reported in the literature up to 1952. The mechanism of histamine is not known. Some people feel that it causes dilatation of the blood vessels going to the tumor and effects a sudden release of epinephrine. Others feel that perhaps there is a direct stimulation of the tumor cells, much as the chief cells of the stomach are stimulated by histamine. The dangers of the test are many, the main one being, of course, that by causing an extreme pressor response, one can cause the individual to have a cerebral vascular accident and die.

The second chemical used for provocative tests, tetraethylammonium chloride, was introduced by LaDue in 1948.[3] Trying for a depressor response in a patient with a pheochromocytoma, he injected 400 mg. intravenously and induced a prompt pressor response. By merely tilting the patient from a horizontal to an upright position, he caused the pressure to drop from 230 to 95 systolic, and from 125 to 80 diastolic. Thus a positive test with Etamon gives one a prompt increase in blood pressure, and with a negative test there is either no change or a decrease. Two false positives and three false negatives had been reported by 1952. The mechanism of action of Etamon is not known. LaDue thought that it caused vasodilatation by means of blocking the ganglionic nerve cells. Page and Taylor, however, demonstrated in 1947 that Etamon actually potentiated the action of epinephrine and angiotonin.[4] They concluded that it was by such means that it functions as a provocative test. Now it has been shown that one can prevent the pressor effect by preceding the Etamon with an injection of benzodioxane. I have asked Dr. Hamilton to find out how much time elapsed between the administration of benzodioxane and the Etamon test.

Dr. Hamilton: The benzodioxane test was completed six days before.

Dr. Lubin: Shapiro and Ferris's presentation of this means of preventing pressor response is abstracted in the 1949 volume of the JOURNAL OF LABORATORY AND CLINICAL MEDICINE, though the details aren't included in that abbreviation.[5] But in any case I am uncertain exactly how to interpret the results described in our protocol. As you will recall, following the 400 mg. of tetraethylammonium chloride there was a sudden drop of the blood pressure from 140/88 to 60/0, at which time the patient became unconscious and developed a tremor of the left hand. The capillary pulse of the nail beds was visible. Afterwards, the blood pressure rose to 250/120 and fell to 120/80 mm. Hg. The fall in pressure following Etamon would have to be taken as a negative result, except for the fact that there was a rather marked pressure response subsequently. This, at best, was an atypical Etamon test.

Mecholyl is another substance used for a pressor test. It was not used on this patient, and indeed it has been discarded by many people.

The next group of tests used in diagnosing pheochromocytoma are the adrenolytic. The commonest of them until about a year ago was the benzodioxane, introduced by Goldenberg in 1947. After one has administered .25 mg. intravenously, a prompt fall in blood pressure, both systolic and diastolic, averaging 60 mm. and lasting for approximately 10 to 15 minutes is regarded as a positive test for pheochromocytoma. Because in essential hypertension there may be a slight pressor response, benzodioxane is adrenolytic but not sympatholytic. At least eight false negative and three false positive results had been reported by 1952, and there have been many more since then. The false positives were in patients with renal hypertension, uremia and (one patient) neuroblastoma. And we have subsequently learned that sedation will give a false positive test with benzodioxane. The mechanism of its action is unknown, but it is thought to accelerate the inactivation of epinephrine. The major side effect is a potentially dangerous pressor response. Other side effects such as anxiety, nausea and perspiration are not particularly serious.

The next adrenolytic substance is Regitine, and it is the agent of choice because of its ease of administration, its lack of side effects and its great specificity. After one has achieved a basal blood pressure level, he injects 5 mg. of this substance intravenously and checks the blood pressure every half minute for three minutes. Subsequently, the blood pressure is taken every minute for another seven minutes. If there is a pheochromocytoma, there should be a prompt drop in blood pressure of at least 35 mm. systolic and 25 mm. diastolic. If it is 30 systolic and 20 diastolic, the test is not abnormal, and this point is important, for by not sticking to the strict criteria one runs the danger of having some false positive results. False negatives are extremely rare with this substance, but false positives will occur with sedatives or narcotics. Anti-hypertension medication should have been discontinued for at least 24

hours before the administration of Regitine. Patients who have been on thiocyanate must have had that stopped for at least four to six days, and this test is of no value in the presence of uremia.

Dibenamine, though it has been used, has been discarded because of the many false negatives and false positives that occur and because it may not respond to norepinephrine or other pressor substances when there is a marked depressor effect on the blood pressure.

The best method for diagnosing pheochromocytoma, the chemical assay of catechols in the blood and urine, was introduced recently by Goldenberg and Aranow.[6] It is specific, but probably it was unavailable when our patient was hospitalized. Actually there are four such methods that may be employed for diagnosing pheochromocytoma. One is a bio-assay on cats, another is paper chromotography, the third is a photofluorometric method and the fourth is a quantitative chemical measure of the substance. In one series of 16 cases of pheochromocytoma, Goldenberg reported that 15 out of 16 had positive tests with bio-assay on cats, 15 out of 16 had positive tests with paper chromotography, and 16 out of 16 had positive tests with the photofluorometric method. In consequence, Goldenberg has assumed that the photofluorometric method is best. The normal range is from 20 to 50 micrograms per 24 hours of urinary catechols. In the patient with essential hypertension, the range is from 75 to 100. In patients with sustained hypertension due to pheochromocytoma, the range is from 600 to 2,700. In patients with paroxysmal hypertension due to pheochromocytoma, the range is 110 to 580, depending upon whether or not there was an attack recently. But enough for the chemical determinations.

Over a period of two weeks, the patient had "good days" and "bad days." We are told that there was an apparent gradual deterioration, with more frequent bouts of severe headache and hypertension accompanied by mental confusion, sweating of the hands, nausea and occasionally vomiting. The sweating of the hands may have been very significant. Certainly in a patient with pheochromocytoma marked hyperhidrosis is the rule. It may also appear, however, in patients with anxiety states or essential hypertension.

Now to run down some of the other entities in the differential diagnosis. I mentioned how I would rule out nephritis. Hysteria is very difficult to rule out. The clinical history on this patient, I feel, is inconsistent with hysteria, and I propose to exclude it on that basis. As for lead poisoning, there is nothing in the protocol to suggest its clinical characteristics. As you recall, tests for porphyrins in the urine were obtained, and I hope a coproporphyrin test was obtained at that time. Of course coproporphyrins are usually positive in heavy-metal intoxication, and the fact that they can be assumed to have been normal is just another point against lead poisoning. As far as essential hypertension is concerned, there is no way that I know of ruling out that possibility conclusively. Yet I feel that the most tenable diagnosis in this case is pheochromocytoma, and that is the diagnosis that I shall sit down with.

Dr. Hamilton: Thank you very much, Dr. Lubin. I think that is an excellent discussion of this problem. Are there any questions that you would like to direct to Dr. Lubin?

Student: If the renal arteries are occluded, how soon could one expect a rise in blood pressure?

Dr. Walter M. Kirkendall, Medicine: With a complete occlusion of renal arteries, I don't think there necessarily would be a rise in blood pressure at all.

Dr. Hamilton: In other words, you believe that a partial occlusion of the renal artery could produce paroxysmal hypertension of this sort?

Dr. Kirkendall: I think it would be unlikely.

Dr. Hamilton: With an occlusion of renal artery, one might not get any rise in blood pressure initially?

Dr. Kirkendall: With partial occlusion you will frequently get a rise in blood pressure.

Dr. Hamilton: Is it a gradual rise, or does it come on immediately? Or isn't that known?

Dr. Kirkendall: I do not know.

Dr. Rubin H. Flocks, Urology: Dr. McCann, professor of medicine at the University of Rochester, in New York, back in 1940 or 1941 reported a series of cases of movable kidney with intermittent hypertension produced by change of position of the patient.[7] It was at the time when there was a great deal of interest in that.

Dr. William B. Bean, Medicine: Did he demonstrate whether the obstruction was vascular or ureteral?

Dr. Flocks: He felt that is was vascular rather than ureteral.

Dr. Adolph L. Sahs, Neurology: Dr. Hamilton and I saw this patient at the request of her local doctor. We examined her in her home and were able repeatedly to demonstrate that when she sat up—that is, sat up in bed in the flexed position—the blood pressure went up and she developed a very severe headache. When we had her lie down, the pressure fell very soon and the headache diminished and eventually disappeared. I think we repeated that procedure at least ten times in her own home. Another feature which may or may not be indicated in the protocol was the fact that when she stood—that is, got out of bed and stood erect—these changes didn't occur with any consistency. At the moment, we certainly placed a great deal of weight on the fact that she developed her most serious trouble when she sat up in bed in the flexed position.

Dr. Hamilton: Early in the course of her illness, a number of tentative diagnoses were entertained: histamine cephalalgia, overtreatment with thyroid, chronic faucial tonsillitis, tension headaches, mi-

graine headaches and psychoneurosis. A neck brace was suggested because of an old spur found on the cervical spine, and she used the brace for two or three weeks. After several months of observation and careful study, we thought that a pheochromocytoma would explain the cause for her illness. We therefore asked Dr. Flocks to operate upon her, and he did.

Dr. Flocks: As you know, Dr. Tidrick, Dr. Gius, Dr. Culp, Dr. Bunge and I have been interested in discovering the best surgical approach for exploration for pheochromocytoma, particularly because of the extreme difficulty in making a definite clinical diagnosis of the lesion. At least that was our special reason prior to Dr. Goldenberg's announcement of his chemical test, which seems far superior to anything that we have had before and which Dr. Lubin has reviewed so capably.

The X-ray pictures definitely contraindicated a pheochromocytoma in the usual position, and we explored this patient bilaterally, using a posterior approach that was first suggested by Young, one which facilitates a bilateral exploration of the suprarenal regions and the region of the great vessels on both sides all the way down to the region of the bifurcation of the aorta.

As a result of our recent studies, Dr. Tidrick, Dr. Gius, Dr. Culp and I feel that the abdominal approach probably would have been better, but only because patients differ in build and doctors are variously experienced as regards the anatomy that is involved. At any rate, we explored both areas very carefully. We got very nice exposure of the region of the great vessels and the adrenal, and there was no evidence of any tumor in the region of the adrenals or elsewhere in that area. A small piece of kidney was removed for microscopic study because of the evidence of partial renal damage and the hypertension.

Dr. Jack M. Layton, Pathology: Did the patient have any changes in pressure when you positioned her on the table?

Dr. Flocks: No. We didn't position her. She was on her abdomen. There was no change in pressure as we manipulated the adrenals and the kidneys.

Dr. Hamilton: Thank you, Dr. Flocks. This is most disconcerting to say the least. Dr. Carter, you might say a word about that renal biopsy.

Dr. John R. Carter, Pathology: The renal tissue was normal in every respect. There was no tumor, infection, or arteriolo-nephrosclerosis.

Dr. Hamilton: That is even more discouraging, in view of the fact that even the amateurs could see the vascular changes in the eye grounds. Any other questions?

This patient became apneic during the operative procedure, and it was necessary for the anesthetist to breathe for her. It was noted during the operative procedure that the pupils became widely dilated, a phenomenon that didn't seem to be due to hypoxia. She was returned to her room, still apneic. Examination of the eye grounds revealed massive hemorrhages. The blood pressure fell to 40/0. The anesthetist kept this patient alive by artificial respiration and later by phrenic nerve stimulation. She was followed very carefully for the next four days. Her blood pressure remained low practically the entire time, but when we elevated the trunk, the blood pressure rose from 40/0 to 115/80 and then slowly dropped again.

She was given plasma and albumin because it was thought at the time that capillary permeability had been altered, permitting the loss of protein from the vascular compartment into the extravascular one, producing an edema which was out of all proportion to the amount of administered fluids. It was also of interest that her skin at all times during this period of presumed shock was pink, warm and moist. The urine output remained normal. However, the last day the extremities did become cold and the patient's heart stopped beating.

Dr. Carter: At autopsy, there was massive collapse of the middle and lower lobes of the patient's right lung, with a pleural effusion of approximately 300 cc. There was patchy collapse of the left lung and diffuse bronchopneumonia. There was no evidence of tumor in the carotid bodies. The organ of Zuckerkandl was normal. Both adrenal glands were normal, except for the small amount of hemorrhage and infarction of the right adrenal secondary to the surgical procedure. The kidneys revealed mild, but definite, tubular degeneration which may have accounted for the mild agonal azotemia. The entire brain was pultaceous. The cerebral hemispheres and the cerebellum were particularly soft. The brain stem and spinal cord were better preserved. An agonal thrombus was present in the left lateral dural sinus. On sectioning the right cerebellar lobe, we found a completely necrotic mass 6 x 4 x 4 cm. It more or less flowed from the cerebellar lobe. The pituitary gland was almost totally necrotic. The brain changes varied from extreme neuronophagia to outright necrosis.

A section of brain showed necrosis and degeneration of the neurological tissue. Some fuzzy structures represented what was left of the neurons. In some of them, indeed, there was almost complete lysis.

In one of the numerous sections of the mass taken from the right cerebellar lobe, the material was so necrotic that it was impossible to determine its precise nature. In spite of the necrosis, it was rather firm in the center, and had the consistency of a golf ball, a circumstance that could in part be accounted for by the presence of small calcific masses. There are a number of tumors that often contain calcium—astrocytomas and oligodendrogliomas, for example—but seldom are these tumors so firm as this one was. Other unlikely possibilities are meningioma and terratoma, but these are mere guesses. Whether the lesion was basically a neoplasm, we cannot be certain, but it was definitely

a mass and presumably a not too vascular one. Some of the special stains that we put on this tissue suggest that there was elastic tissue present in some areas.

Dr. Kirkendall: Could you have ruled out pheochromocytoma from the evidence you secured at autopsy?

Dr. Carter: Well, conceivably what we found could have been pheochromocytoma of the brain, but it is unlikely. Dr. Lubin mentioned the calcification. Ordinarily we do not see calcification in a pheochromocytoma. But we certainly could not rule pheochromocytoma of the brain either out or in. It was very difficult to be sure of anything about the mass other than its apparent tumorous nature. Most pheochromocytomas, however, even the so-called primary ones of the brain, are rather soft, and this one was far from soft, in spite of its being necrotic. A section of cerebellum showed almost complete necrosis of the cerebellar tissue.

A section of the pituitary gland showed some viable tissue along its margin, but all types of degenerative and necrotic changes adjacent to it were found in 95 per cent of the gland.

The infarction and encephalomalacia can, of course, be adequately explained on the basis of the shock, the low blood pressure and the anoxia. It is possible that the tumor was necrotic prior to the operation, but this suggestion is no more than a conjecture based upon the response of tissues to lack of oxygen.

Dr. Paul M. Seebohm, Medicine: Dr. Kirkendall asked whether this could possibly be a pheochromocytoma. I should like to ask whether there was enough cellular tissue present to account for any secretory mechanism.

Dr. Carter: I have no way of answering that question. There was no viable tissue. We can demonstrate calcium, and can show some elastic tissue fibres by means of special stains, but even these could very well be the elastic tissue from blood vessels. We could see nothing that even remotely suggested epithelial tissue. About all one can say is that the lesion was a necrotic mass of tissue.

Dr. Hamilton: What do you think happened to this patient when she was operated upon? Do you believe that there was any possibility of shift of the tumor due to changes in pressure?

Dr. Carter: I understand that someone else is going to discuss that point in a minute. I don't know. One might presume that this tumor did shift and that it did cause pressure on the vital centers. As to what had gone on prior to death it is difficult to determine from the autopsy material. Whether the tumor had been encapsulated, whether it had a cystic component or a secretory component it is impossible to determine. I can say that there was no evidence of herniation of the cerebellar tonsils. There was no pressure defect that we could identify in the brain stem.

SUMMARY OF NECROPSY FINDINGS

At autopsy, a totally necrotic tumor 6 x 4 x 4 cm. was found in the right lobe of the cerebellum. This tumor, though soft peripherally, was firm centrally and was enucleated readily. Almost complete absence of cytological detail precluded a definitive diagnosis. The surrounding cerebellar tissue was necrotic. There was severe generalized encephalomalacia, some areas being extremely pultaceous. The basal ganglia and the brain stem, although involved by ischemic process, were the best preserved areas. Histologically, the changes varied from severe neuronophagia to outright necrosis. The pituitary gland was completely necrotic, and the base of the sella turcica was eroded and perforated, although the dura was intact. A well lamellated thrombus was found in the left lateral dural sinus. There was moderate arteriosclerosis of the larger cerebral vessles, particularly the basilar artery.

The right pleural cavity contained 350 ml. of clear fluid, and the pericardial cavity contained 40 ml. of purulent fluid. The middle and lower lobes of the right lung were massively collapsed, and patchy collapse was present in the left lung. Foci of acute pneumonitis and compensatory emphysema were present in both lungs. Recent infarcts were present in the left adrenal and upper pole of the left kidney. There was mild generalized tubular degeneration (ischemic) of the kidneys, and the BUN and creatinine tests indicated a moderate azotemia.

Except for the cerebellum, no tumors were found in any organ, including carotid bodies and adrenal glands.

NECROPSY DIAGNOSES

Necrotic tumor of right cerebellar lobe
Thrombosis, left lateral dural sinus
Generalized encephalomalacia, severe
Massive necrosis of pituitary gland
Massive collapse, right middle and lower lobes, with focal acute pneumonitis
Pleural effusion, right, and pericardial effusion
Recent infarcts of left adrenal and kidney
Tubular nephrosis, mild, ischemic, with azotemia

Dr. Hamilton: Dr. Sahs, would you like to say anything in addition about the possible mechanics here?

Dr. Sahs: There really is not a great deal to say. I feel a little bit like the outfielder who watches a ball describe an altogether improbable trajectory and fall just inside the foul line. Had he known the ball would fall there, he would have been there to catch it. This problem could have been solved easily if we had deviated considerably from the conventional methods of thinking and had approached the matter from the standpoint of intracranial disease. Tumors can be very deceptive, as Dr. Meyers will agree. They can cause all sorts of peculiar phenomena. Personally,

I have not seen one behave in this fashion. I felt sure at the time that hypertensive vascular phenomena were responsible for the headaches. I find it difficult even now to understand how a tumor this large could shift back and forth, cause intermittency of symptoms and then restore itself. In other words, when these tumors start to shift and cause displacement, restitution does not take place readily. Medullary compression occurs, and the patient may die rather promptly. It is very difficult for me to answer all the questions concerning this particular patient. One question that I should like to ask Dr. Carter is this: was there a pronounced hydrocephalus, and did you see a ventricular dilatation at the time of autopsy?

Dr. Carter: No.

Dr. Sahs: Then I must say that I am unable to answer many of your questions.

Dr. Hamilton: Dr. Meyers, we probably were trapped here by some "fixed attitudinal sets." I wonder whether you may be willing to discuss the headache. At the time of autopsy, considerable discussion took place concerning the mechanism responsible for the patient's symptoms and death. We felt that the tumor was in some way responsible for her illness—related in some way to pressure changes transmitted to the mid-brain. After her lumbar puncture, she got into trouble on leaning over, on the application of pressure to her abdomen, following pharmacological tests for pheochromocytoma and after receiving preanesthetic medications.

Dr. H. Russell Meyers, Neurosurgery: In our scientific endeavors, whether in clinical or the more "basic" areas of inquiry, there is no way of our avoiding the influence of attitudinal sets on what we observe as "facts" and what we draw from those "facts" in the form of postulates, theories, diagnoses, inferences, hypotheses and laws. In this respect we differ in no essentials from artists, theologians, commercial entrepreneurs and weary Willies. Accordingly, the issues don't center around whether we can approach our problems with or without attitudinal sets; rather, they center around (a) our remaining clearly aware of the attitudinal sets we habitually employ, and (b) our willingness to accept particular sets as we address ourselves to particular problems. Let it be said at this point that no one attitudinal set promises to prove universally applicable. We are obliged to select a suitable key for each lock we propose to open.

Dr. Lubin's discussion of the differential diagnosis of the present case aptly illustrates certain points that should be of concern to each of us. In the friendly climate of the C.P.C., I hope he and others will feel no undue sensitivity regarding the analysis that I propose to make, for none is intended. Let us rather view his discussion as a learning situation, for we are all students at different levels of learning, and all of us are appallingly fallible.

The *modus operandi* that Dr. Lubin employed consisted of writing on the blackboard an array of names (symbols) referring to a dozen, more or less, of "clinical entities," then critically measuring the "factual" findings in the present case in terms of the nominal abstractions represented by those "clinical entities," and finally concluding that the "facts" were best accommodated by one and only one of the entities so listed. On that basis, we were brought with more or less comfort to the diagnosis of pheochromocytoma.

Now this procedure constitutes an attitudinal set which has held a highly honored place in the intellectual history of mankind. It is neatly exhibited in Euclidean geometry, Aristotelian logic and scholastic philosophy. The line AB is either equal to, longer than or shorter than line CD, and if it can be shown that the first and second of those propositions are untenable, then it follows that AB must be shorter than CD. In such examples we recognize the usefulness of this particular attitudinal set. Why? Because it applies appropriately to a frame of reference in which it holds valid. That is to say, it exhibits consistency.

But note that its success in resolving this simple geometric problem depends upon the preliminary exhibition of propositions that are *complete,* now and forever, namely that in respect to length, lines can bear only one of three possible Euclidean relationships to one another.

Returning to Dr. Lubin's diagnostic discussion, retrospect reveals that however admirable the intellectual exercise may have been from a dialectic viewpoint, the conclusion reached, that of pheochromocytoma, was apparently incorrect. Why incorrect? Obviously in part because the original array, far from being complete, was wide open at one end. That is to say, it did not encompass all of the possibilities (such as that of a space-taking lesion in the cerebellar fossa), nor did it allow for the numerous diagnostic possibilities that today lie completely beyond our powers of detection, but which we may suppose will be identified by our medical descendents just as surely as we of the current century identified porphyrinuria, hypoglycemia and other metabolic derangements that remained beyond the surmise of our medical forbears.

Here, then, we have witnessed the disorganizing effect that follows the unwitting employment of an attitudinal set (valid enough in certain limited frames of reference) to biologic and pathologic frames of reference where it is operationally inapplicable. Attitudinal sets that might have been somewhat more advantageously employed for such phenomena include those of quantum mechanics, non-Aristotelian logic, modern Boolean algebra and operationalism. But to elaborate on these topics would be to exceed the patience of this audience. The subject is inexhaustible, but we poor humans, alas, are not!

At this point, we may be tempted to conclude

that the lesion found at autopsy in the posterior fossa provides an acceptable account of the patient's course. Unfortunately, however, such a conclusion is far from compelling. Indeed, it appears to me rather unlikely. Passing over the possibility that a small aberrant pheochromocytoma present somewhere in the neck, mediastinum, retroperitoneal tissues and/or pelvis might have escaped detection at autopsy, we are yet obliged to consider the theoretic possibility that the lesion in the cerebellum constitutes a mere incidental finding and that some subtle pathologic process lying beyond the pale of present-day methods of demonstration, constitutes the agent responsible for the patient's clinical course and death.

True, we have committed to heart Kocher's "four stages of medullary compression," a feature of which assures us that up to the time of decompensation, increasing intracranial pressure produces arterial hypertension, bradycardia, stertorous breathing, stupor and coma. Here is a powerful attitudinal set, deep-grained in current medical jargon. But I submit that reliance on the concept just stated has led clinicians astray far more often than it has guided them to a correct diagnosis.

On what grounds can my heresy be supported? Simply those of quantitation. The Kocher schema is reliable (that is, provides dependable predictions) under certain conditions, namely, those in which the magnitude of intracranial pressure approaches or exceeds that of systolic pressure, i.e., about 80 mm. Hg. That has been shown in animal and human experimentation. What is not generally borne in mind is that such conditions are almost never encountered in clinical practice. This is a distinction that makes a difference, for it means that the Kocher schema is largely inapplicable, as it certainly is in the present case, in which no increase of intracranial tension was at any time demonstrated. You will recall the normal reading of spinal fluid pressure. The bulk of clinical cases with "increased intracranial tension" range from 15 to 40 mm. Hg., i.e., two to six times normal, and do not exhibit arterial hypertension, much less paroxysmal bouts of hypertension. Nor is there evidence, real or fancied, to indicate that a lesion of the type found in the patient's cerebellum could have triggered a mechanism by which paroxysmal rises and falls of blood pressure would occur. Lesions of this size and larger are not infrequently clinically silent with respect to neurologic and vital signs. In any case, experiments in the dog and human being reveal that *brief* intracranial alterations do not suffice to raise the arterial pressure and produce bradycardia; they must be relatively sustained. This accords with the clinical experience that paroxysmal bouts of arterial hypertension are almost unknown in patients harboring brain tumors, even when the lesions are located in the regions that we might consider most vulnerable, namely, those of the third and fourth ventricles. One fatal case, that of Penfield, published several years ago under the title "diencephalic autonomic epilepsy," is an apparent exception, but even this does not help much in our present case, for the diencephalon was apparently uninvolved in the latter. And there remains to be examined the other side of the coin: that paroxysmal arterial hypertension most often occurs in conditions unassociated with detectable intracranial lesions.

In conclusion, I feel forced to suspend judgment, for I can feel no confidence that the cerebellar lesion (neoplasm?) disclosed at autopsy reconciles the essential features of the patient's clinical course. Agnosticism is certainly not a preferred stock; but it is all too often (as in the present case) forced upon us.

Dr. Kirkendall: Despite the fact that there is seldom a causal relationship between brain tumors and paroxysmal hypertension, we do have to consider the possibility of cerebral disease in patients presenting themselves with periodic elevations of blood pressure and headache. It is well established that tumors in the hypothalamus may cause periodic hypertension. Also Dr. Penfield's case that Dr. Meyers has mentioned suggests that a tumor intermittently occluding the third ventricle may cause paroxysmal hypertension. Physicians who see a great number of patients with arterial hypertension are familiar with the fact that anxiety may cause all of the symptoms of pheochromocytoma. Cerebral tumors and overwhelming anxiety seem to cause such an effect by tremendous overactivity of the sympatho-adrenal tissues in the body, much in the same way that large doses of adrenalin and/or noradrenalin may cause those symptoms. Many attempts have been made to separate individuals who show those effects from the great body of essential hypertensive patients. Page has labelled them as having a "hypertensive diencephalic syndrome."

With these states, as with pheochromocytoma, patients may have episodic hypertension, tachycardia, pallor of the face, cold and wet extremities, tremulousness, headache and hypermetabolism. The episodic hypertension which accompanies these conditions does not respond to the usual pharmacologic tests for pheochromocytoma, for the impulses are probably mediated through the nerves, rather than humorally. I think it should also be made clear that the conditions which Dr. Lubin discussed in his differential diagnosis likewise do not respond to the pharmacologic tests for pheochromocytoma as the disease states from these tumors do. It is of practical interest that according to Aranow, if all appropriate pharmacologic tests for pheochromocytoma are negative, there has been no instance in which a chromaffin neoplasm has been found.[8] Therefore, it is probably wise to consider other causes for paroxysmal hypertension and hypermetabolism after these tests have been found to be negative.

I saw this patient during her illness and felt that she had a pheochromocytoma. It seems certain that she did not have such a tumor, but did have a cerebellar lesion which probably was responsible for the episodic hypertension and headache. Experiences such as this can only point up our fundamental lack of knowledge concerning causes of such blood pressure elevation.

REFERENCES

1. Smith, Homer W.: The Kidney: Structure and Function in Health and Disease. New York, Oxford University Press, 1951, pp. 39-62.
2. Roth, G. M., and Kvale, W. F.: Tentative test for pheochromocytoma. Am. J. M. Sc., **210**:653-660, (Nov.) 1945.
3. LaDue, J. S., Murison, P. J., and Pack, G. T.: Use of tetraethylammonium bromide as a diagnostic test for pheochromocytoma. Ann. Int. Med., **29**:914-921, (Nov.) 1948.
4. Page, I. H., and Taylor, R. D.: Augmentation of vasoactive substances by tetraethylammonium chloride. Circulation, **1**:1233-1245, (June) 1950.
5. Shapiro, A. P., Baker, H. M., Hoffman, M.S., and Ferris, E. B.: Physiologic and pharmocologic study in a case of pheochromocytoma. J. Lab. & Clin. Med., **34**:1751, (Dec.) 1949.
6. Goldenberg, M., Serlin, I., Edwards, T., and Rappaport, M. M.: Chemical screening methods for diagnosis of pheochromocytoma. I. Nor-epinephrine and epinephrine in human urine. Am. J. Med., **16**:310-321, (Mar.) 1954.
7. McCann, W. S.: Orthostatic hypertension: effect of nephroptosis on renal blood flow. J.A.M.A., **115**:573-578, (Aug. 24) 1940.
8. Aranow, H., Jr., Pheochromocytoma. In: Monographs in Medicine, Series 1, ed. by W. B. Bean. Baltimore, The Williams and Wilkins Company, 1952.

ISMS Ready to Start Group Insurance Plan

The House of Delegates of the Iowa State Medical Society at its 1955 annual meeting selected the Commercial Insurance Company of Newark, New Jersey, to underwrite group accident and health coverage for its members. The company was recommended to the House by the special committee of the Society that has been considering the matter for the past two years.

In recommending the Commercial Insurance Company of Newark, the committee listed some of the factors which assisted it in selecting this company: benefits offered, potential service to the group by the administrator (Holmes, Prouty, Murphy & May, of Des Moines), cost of the plan, and experience of other groups with coverage by the same insurance carrier.

A summary of the benefits offered under this plan is as follows:

1. Seven years non-confining sickness benefits and lifetime accident benefits are available. The benefits are payable in weekly installments ranging from $50 per week to $100 per week. Accidental death and dismemberment indemnity is available from a $1,000 principal sum to a $5,000 principal sum. This accidental death and dismemberment coverage is unique in that it will offer multiples of the weekly benefit for dismemberment rather than a fraction of the principal sum, as is the usual case.

2. This extremely liberal coverage is made possible by the combining of a basic insurance plan with optional extended coverage, available at additional premium, to make a total of the seven years' non-confining sickness benefits and lifetime accident benefits. Beyond the age of 50, members are charged gradually increasing premiums for the extended coverage, so that the cost of this part of the insurance may be equitably distributed.

3. The plan, together with the extended basic coverage, provides for a full eight years of accident disability benefits from the doctor's own profession. The usual period is only five years for accident disability from the doctor's own profession. From the eighth year on, the lifetime coverage will indemnify disability as a result of an accident for *any* occupation.

4. Optional hospital benefits are available. For an additional annual premium, daily hospital benefits for a period of 90 days are payable in addition to the weekly sickness or accident benefit.

5. The enrollment period is to last six months, during which time all members to age 70 who are in active practice will be accepted for the basic plan without evidence of insurability and with all pre-existing medical conditions covered. This plan will allow a maximum of $75 per week in benefits during the enrollment period without evidence of insurability, instead of the usual $50-a-week benefits offered.

6. As is required by state law, the policies will become effective as soon as 50 per cent of the members have been enrolled.

7. This plan offers complete insurance protection to the female members of the Iowa State Medical Society, and there are no exclusions other than the ten months' waiting period for obstetrical benefits.

8. After a policyholder's discharge from military service, automatic reinstatement of insurance is possible without evidence of insurability.

9. There are no aviation exclusions or restrictions as regards either travel on scheduled airlines or private flying.

10. The Des Moines office of the insurance company will handle all matters of the enrollment, contacts with the members, and—most important—claims settlements and payments directly with the members.

The initial enrollment of members of the Society in this plan will be handled by direct mail beginning on or about June 1.

Editorials

THE 1955 ANNUAL MEETING

This year signalized a new era for the Iowa State Medical Society, insofar as annual meetings held in Des Moines are concerned, for it was the first in which the Veterans Memorial Auditorium could be used for the sessions. The building proved extremely well adapted to our needs.

The House of Delegates, under the excellent leadership of the Speaker, Dr. Herman J. Smith, found its quarters conducive to the transaction of its large amount of business. The general sessions were amply accommodated, and the section meetings fared rather well for their gatherings too. Because attendance was unexpectedly large, the latter, in some instances, were somewhat crowded, but since there is no doubt that the Auditorium contains plenty of sufficiently large rooms, more commodious quarters can be provided them in future years.

Best of all was the opportunity provided both scientific and commercial exhibitors to set up attractive and spacious displays, and it was evident that all of them were far better satisfied than they have been in times past. We should like to compliment the College of Medicine of the State University, the Veterans Administration and the other organizations and individuals who prepared scientific exhibits. Their presentations were of very high calibre, and we were glad to note that they were rewarded with high attendance. The scientific motion pictures shown continuously for several hours during each of the days of the meeting were similarly good.

Since everything was under one roof, physicians were spared much effort in traveling from session to session to exhibits to luncheon meetings and back again. The attractive lounge and inexhaustible refreshments provided by the Blue Cross-Blue Shield organizations eased the physical wear and tear.

Altogether, our 1955 meeting was an outstanding success. Here is a comparison of 1954 and 1955 attendance figures:

	1954	*1955*	
Members	858	906	
Guests	95	545	(including 82 physicians)
Woman's Auxiliary	209	250	
Future Nurses Clubs of Iowa		85	
Technical Exhibitors	145	185	
Total	1,307	1,971	

The JOURNAL will again publish during the year the papers presented at the meeting so that those members who had to stay at home will have an opportunity to share in the excellent programs that were presented. As usual, the transactions of the House of Delegates will appear, in as great detail as is feasible, in the official July issue.

Plan now to attend the 1956 meeting, which is likewise to be held at the Des Moines Veterans Memorial Auditorium. The dates to mark on your calendar are April 22-25.

A PICTURE OF INDUSTRIAL MEDICINE IN IOWA

For the first hundred years of its existence, Iowa was known as an agricultural state, the income from agriculture being its chief source of revenue. Industries for the most part were small. Most of them were located in the larger cities and even so, no city was thought of as being predominantly industrial in character.

During World War II, a change began that is still continuing. Large industrial plants to provide materials of war were built, some of which are still in existence. Many of the smaller plants converted to war-time manufacture, and a good many of them still hold contracts to supply such material.

Following 1945, with its atomic bombing of Hiroshima and Nagasaki, a trend toward dispersion of industry became apparent. Many large concerns that had formerly been concentrated in highly industrial areas began erecting smaller plants throughout the United States. There were several reasons for such dispersal. First, possibly, was the desire to scatter manufacturing facilities throughout the country so as to make them less vulnerable to attack than they would be in concentrated industrial regions. Second, was the realization that there was a large labor market available in and near the smaller cities of the nation. These two factors probably played the largest part in the scattering of manufacturing facilities.

Since 1945 many industries have located in Iowa. In 1953, when, for the first time, the income from industry exceeded that from agriculture, it became apparent that industrial medicine had become really important and deserved more consideration than it had received in the past.

This influx of industry has created many problems—medical, economic and social. It is not our intention to discuss more than the medical phase, although inevitably it has posed all of the others as well.

The more workers in a plant, the more medical problems arise. There are always accidents to be considered, and working conditions may create health hazards. Dust, noxious fumes and excessive heat are but three among many.

In areas that have been industrialized for a

long time, it has been common practice to have a medical director in the plant. Here in Iowa we find that there are only six full-time industrial physicians, providing medical coverage to eight companies. They are paid according to a variety of plans, by salary, by fee bill, and (two of them) by a combination of both.

Of the physicians replying to the questionnaire, sent to the membership of ISMS by the Committee on Industrial Health, 466 said that they do some industrial work. Of these, 29 are on a salary, and 425 are paid on the basis of fee for service. Naturally, many of these physicians give medical care only in their offices or in hospitals as patients are sent to them from the plants. In some instances, of course, they are called to the plant to handle emergencies, but it was somewhat surprising to find that only 78 of the 466 physicians spent a definite amount of time per week in the plants they serve. These 78 reported that they spend 420 hours in-plant, or a little over five hours per week. It has been the feeling of the Committee, most of whom do some industrial medicine, that it is most important that a physician spend some time in the plant, even if no more than an hour a week. Only by so doing will he gain a true picture of working conditions and be able to make recommendations for improving the health standards.

Many physicians did not report on the number of companies they served, probably because they give care only when patients are sent to their offices. Of the total, however, 224 reported that they served 903 companies. Some said only that they served many companies.

Forty-nine doctors reported that they had industrial nurses working under their direct supervision, the number of nurses being 150. Of these nurses, 119 worked full time in the plants, and six divided their time between one or more plants. The balance, it is presumed, worked part time only, and for one plant.

Thirty-three physicians reported that they knew of plants employing industrial nurses who worked without any medical supervision. In the opinion of the Committee, the ethics of such a medical program may be open to question. One hundred sixty-one physicians answered that they did not know of any nurses working without medical supervision.

There seemed to be a variance of opinion on the question of whether more industrial nurses are needed, 47 physicians feeling that the need is not being adequately met, and 174 that there are enough nurses doing that sort of work.

The answer as to what percentage of the doctor's service is given to industrial medicine was vague in many instances, many physicians saying that only a small part of their time is spent on such patients, and some admitting they didn't have any idea about the per cent. Of the replies, 432 physicians gave figures, and the average came to about 8.5 per cent. In 82 replies, the doctor said he used an industrial fee bill, but 237 said they did not. Almost all of the replies indicated that fees paid for industrial work were about the same as those paid in private practice. In 377 tabulated replies, the average of the work that was covered by insurance was 88.5 per cent. Very few physicians reported having any difficulty in collecting.

Several times in past years, the House of Delegates of the State Society has been asked to consider establishing a fee schedule that could be used, among other things, for compensation cases. To date no such request has been considered favorably. The Committee was interested to find that 163 physicians felt such a statewide industrial fee bill would be helpful, if set up by the State Society, and 132 felt it would not be.

Another facet of industrial medicine that has been discussed at great length by the Committee is the relationship existing between plant medical services, whatever they may be, and the physicians engaged altogether in private practice in the community. A proper program of good industrial medicine should never infringe on the private practice of medicine, and it is essential that there be close cooperation between local physicians and the men serving as medical consultants or directors in industry. On the questionnaires, the replies from 354 physicians said such cooperation existed, whereas only 24 said it did not.

Absenteeism is one of the biggest problems faced by all industry today, be it large or small. Ideally, a good medical program in a plant should be able to reduce that difficulty by prompt attention to small injuries as they occur so that subsequent infection and disability may be prevented and so that illness, when it occurs, is discovered promptly and is referred to the patient's family physician. On his part, the family physician who has a good knowledge of the type of work done by his employee-patient will know better when he can return to work, and when he should not be on the job. Of the physicians replying to the question as to whether absenteeism could be reduced by an organized closer association between private medicine and the plant medical office, 213 said yes and 81 said no. Two hundred sixty-five physicians were interested in expanding their industrial work through assistance to small industries in their community, and 110 were not.

Only 83 physicians reported they were members of industrial medical societies, and 370 said they were not. Sixty-four said they attended industrial meetings, and 197 said they did not. Two hundred sixty-three reported they would be interested in a one-day meeting representing management, labor, industrial physicians, general practitioners, and other industrial and public health workers, and 115 said they would not be.

One of the most interesting things of the whole

survey was the fact that 353 physicians doing industrial work asked for a summary of the answers. Of those who did no industrial work, about 50 or 75 asked for the summary anyway.

The State Society's manual of directives for the nurse in industry should be ready for distribution by June 1, and a copy will be sent to every member of the State Society. The Committee will continue its work in this field of industrial medicine and hopes to hold a few institutes in various sections of the state sometime during the coming year, at which time the emphasis will be placed on bringing to the attention of Iowa doctors the many new developments in this field.

Because of the fact that so much interest in industrial medicine was shown by the number of physicians requesting a copy of the summary, and also by the number who added comments and suggestions to their questionnaires, the Committee will present an abstract of those comments in the JOURNAL. Thus this report will be made in two parts, the first factual, the second a composite of the varying attitudes and suggestions presented to the Committee by many physicians. This will undoubtedly prove as interesting to the JOURNAL readers as it has to the Committee members, and will shed further light on the many facets of what a good industrial medical program should be.

BAROMETRIC PRESSURE AND HEALTH

Weather has always held a peculiar fascination for all of us, and the criticism attributed to Mark Twain that everyone talks about the weather but nobody does anything about it hasn't noticeably lessened its popularity as a topic of conversation. The wordage devoted to the topic is in part attributable to its preeminent appropriateness when one wants to begin a converation with a complete stranger, but probably is almost equally due to the fact that since we really know very little about either weather itself or its effects, respect is likely to be accorded to whatever any of us say regarding it.

The effect of weather upon the physiology of joint functions has never been adequately explained. The arthritic patient assumes the role of prophet and achieves a record of accuracy that is rather astounding when one compares it with that of the Weather Bureau, with its multitude of scientific gadgets and volumes of statistics.

Heart patients appear to have a sensitivity to weather changes, too, and during the past several years physicians have been collecting statistics in an attempt to pinpoint it. Reporting on the cases seen over a considerable period at Iowa Methodist Hospital, Des Moines, Drs. Margulies and Baridon reported last fall[1] that a fairly pronounced peak in myocardial infarction admissions had occurred during winter months. To them, that fact suggested a probable connection between that sort of difficulty and the coming of cold weather, even though, as they suggested somewhat parenthetically, the approach of income-tax-return time may have been a coincident influence, though reports of studies in Boston[2] and Chicago[3] indicated no weather connection at all, and though the results of one conducted in Dallas[4] showed highest incidence in hot weather.

Recently, some at least of the same men who made the earlier Dallas study have come to some different conclusions on the basis of a new set of figures.[5] During a six-year period, they say, there were 283,931 admissions to three hospitals in Dallas, and of that number, 1,666 patients entered with a diagnosis of acute myocardial infarction. Critical analysis established that diagnosis for 3,386 of them—1,015 males and 371 females. When the clinical onset of infarction was correlated with meteorologic data, it was discovered that the peaks in incidence coincided with sudden influxes of cold, polar air more frequently than with a temperature change of the opposite sort.

Up to that point, it would seem that Drs. Baridon and Margulies were gaining support. But wait! Both cold, northerly winds and searing tropical blasts at Dallas are accompanied by rapid elevations of barometric pressure, and since almost as many cases of myocardial infarction have their onset in the severely hot spells as in the bitterly cold ones, the Texans speculate that elevated atmospheric pressure, rather than either extreme of temperature, is what brings trouble to heart patients.

Their new idea is an interesting one, for a rise in pressure could affect patients at rest or in bed in air conditioned buildings—ones whom it has been difficult for us to think could be affected by changes in outdoor temperature, no matter how sudden or extreme.

But, as in all of the other discussions of weather, no one appears to have progressed beyond the speculative stage.

1. Baridon, D., Jr., and Margulies, H.: Myocardial infarction as treated at the Iowa Methodist Hospital: five and one-half year study. J. Iowa M. Soc., **44**:416-420, (Sept.) 1954.
2. Master, A. M., Dack, S., and Jaffe, H. L.: Factors and events associated with the onset of coronary artery thrombosis. J.A.M.A., **109**:546-549, (Aug. 2) 1937.
3. Mintz, S. S., and Katz, L. N.: Recent myocardial infarction. Arch. Int. Med., **80**:205-236, (Aug.) 1947.
4. Heyer, H. C., Teng, H. C., and Barris, W.: Increased frequency of acute myocardial infarction during summer months in warm climate. Am. Heart J., **45**:741-748, (May) 1953.
5. Teng, H. C., and Heyer, H. E.: Relationship between sudden changes in weather and the occurrence of acute myocardial infarction. Am. Heart J., **49**:9 (Jan.) 1955.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529-36th Street, Des Moines 12, Iowa.

MISS MARY L. McCORD

The editors of the JOURNAL have been sorry to learn that Miss Mary L. McCord is about to leave the employ of the Iowa State Medical Society. She has submitted her resignation, effective June 15, and it has been accepted by the Board of Trustees.

Under such circumstances it is customary to point out that the individual deserves credit for many years of devoted and faithful service. But statements of that sort, regardless of the particular words in which they are phrased, are no more than cliches, so worn out, indeed, as to seem patently artificial and insincere. Quite on the contrary, we believe that Mary is entitled to a truly ringing tribute, and we wish we were able to write one.

In the very small group of people who publish the JOURNAL, Mary has been the central figure ever since she came to work at the Society's offices in the early 30's. At various times her title, as listed on our masthead, has been "Managing Editor" or "Business Manager," but in addition to performing other tasks it has always been she who conducted the diplomacy that is peculiarly essential to the continuing success of a publication such as ours. Quite literally, we assure you, we don't know how we shall get along without her.

Throughout the many years during which she was executive secretary of the Society, the employees who worked with her were highly appreciative of her ability—an extremely rare one—to delegate responsibility and then to let it stay delegated, checking on major results rather than on minor details. In addition, her obvious devotion to the Society was contagious.

Mary hasn't told us what sort of work she plans next to do, but our best wishes for her success, as well as our affection, go with her.

WE STAND CORRECTED

Mr. Marshall Blake, the executive director of the Iowa Division of the American Cancer Society, has taken us to task for the editorial on his organization's activities which we published in our April issue, or, in particular, for the part of it in which we suggested that the share of its funds spent on money-raising and administration was perhaps too large. The figures that we had been sent, it seems, covered expenses for a variety of functions at the national level that are undeniably essential to the fight against cancer and which certainly should not have been lumped with overhead.

Of the 12 per cent of moneys collected which the Cancer Society's literature had led us to believe went last year entirely or principally for administrative and clerical work at the national level, he has informed us that 2.1 per cent was spent for professional education, 2.4 per cent for public education, 1.2 per cent for service to cancer patients, 0.9 per cent for statistical research and 0.4 per cent for contingencies. Thus only 5 per cent of the funds collected throughout the country (5 per cent of $21,700,000) actually was spent for administrative expense and fund raising (2.6 per cent and 2.4 per cent, respectively).

When one adds the 7 per cent Iowa fund raising and administration cost to the 5 per cent national figure, he gets a 12 per cent total—which, Mr. Blake points out, is appreciably below the 15 per cent that is regarded as maximum for the efficient use of contributed money.

We are happy to do what we can to rectify the false impression that we have helped to create, but if we may, we should like to point out to the Cancer Society and to other such groups that both physicians and the general public look with particular interest for evidence that their gifts are being managed economically. For that reason, statistics on the costs of campaigns and administration should be presented carefully and in such a way that misunderstandings will be virtually impossible.

MARKS OF THE CAPABLE PRACTITIONER

It has been wisely suggested in some quarters that continuing requirements be imposed on those who wish to qualify for certain grades of proficiency in much the same way that hospitals have to meet standards for ratings.

What are the identifying features of the competent practicing doctor? What practical yardsticks can be applied to measure the ever-on-the-job quality of the individual practitioner's performance?

We can use the following check list when we are in the mood for critical self-examination:

1. Are the symptoms the main target in treatment, or, especially in the problem cases, do we take time to search out and identify the main disturbances? Do we give sufficient attention to what the patient tells us, even though doing so is time-consuming?

2. Do we keep adequate clinical record as an aid to diagnosis and to prevent confusion in the treatment of a more or less chronic ailment?

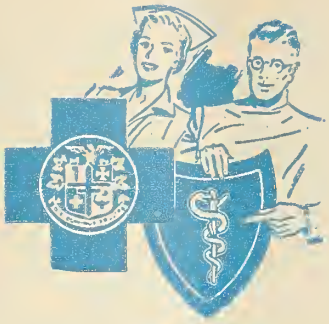
3. In obscure and critical cases, do we make proper use of the consultants who are available?

4. Do we secure autopsies, and are we present when they are performed?

5. Do we read the current medical literature as exhaustively as possible, and are we regular in attendance at medical society and hospital staff meetings?

—Adapted from an editorial in the WESTCHESTER MEDICAL BULLETIN

BLUE CROSS



BLUE SHIELD

Blue Shield Acts on House of Delegates' Recommendation

Below is a portion of the report of the Reference Committee on Insurance and Medical Service that was unanimously approved by the House of Delegates of the Iowa State Medical Society at its Annual Meeting in April, 1955.

> "It is recognized that discrepancies and inadequacies exist in the physician fee schedule. This is especially true in medical fees as distinguished from those which are surgical in nature. It was pointed out by the Blue Shield Executives that now, with ten years' experience, sufficient statistical data are on file so that a more realistic schedule can be introduced. To this end, it was suggested that interested groups such as the internists, general practitioners, pediatricians, etc., through their appropriate organizations, make proposals to the Blue Shield Board for suggested fee schedule changes. We gained the impression that a favorable reception would be accorded such proposals.
>
> "Further study should also be given toward inclusion of payment for diagnostic procedures. It was the opinion of those who appeared before the Committee, and likewise indicated in the studied reports, that the $3,600 limit was not adequate to supply the growing demand for more coverage by patients in the middle and higher income levels. It was suggested, and your Committee recommends, that exhaustive study be made toward providing another and separate full coverage policy embodying higher premiums, higher fees, and a top level coverage somewhere above the present limit. No such venture should be introduced without careful study coupled with competent business advice."

At its meeting on Sunday, May 15, the Blue Shield Board of Directors, by unanimous vote, instructed the Medical Advisory Committee, of which Dr. Gordon F. Harkness, of Davenport, is chairman, to begin making studies immediately.

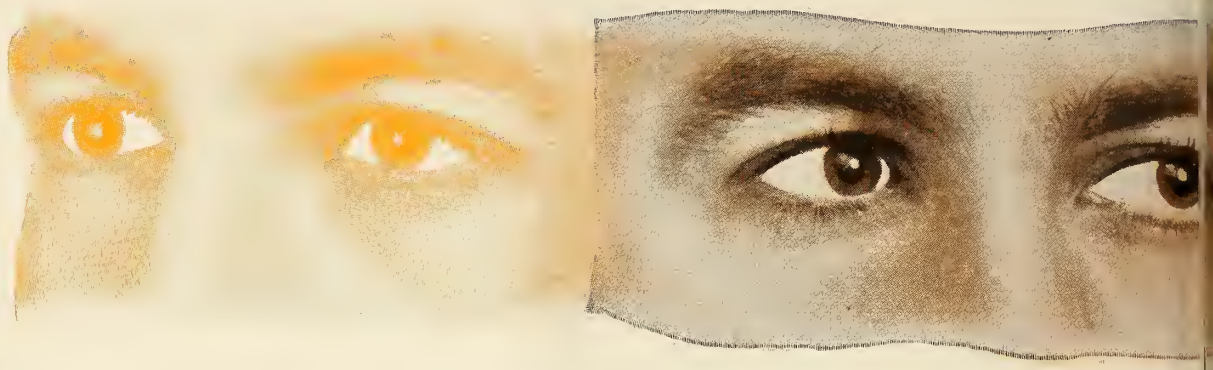
That Committee will ask each specialty group to submit recommendations designed to remove inequities from the present Blue Shield fee schedule. Also, it will seek recommendations for a higher and more realistic fee schedule.

Each specialty group will be requested to name a spokesman to meet with the Medical Advisory Committee and to review not only the present schedule, but also the complete composite one, so that a proper balance can be established between the two.

When these preliminary steps have been taken, recommendations will be forwarded to all of the doctors in Iowa with the request that they consider them and express their views.

It is hoped that the project can be completed before December 31, 1955.

MORE AND MORE PHYSICIANS ARE TURNING



ACHRO

WHEN A BROAD-SPECTRUM ANTIBIOTIC IS INDICATED

Lederle



MYCIN*

HYDROCHLORIDE
TETRACYCLINE HCl *LEDERLE*

Within the first few months of its introduction, ACHROMYCIN was being widely prescribed. Each succeeding month has seen its usage increase as more physicians have come to know and value ACHROMYCIN in its many dosage forms.

More than a year of widespread use has established ACHROMYCIN as a true broad-spectrum antibiotic, well tolerated by both young and old. It has proved effective against a wide variety of infections caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa. Compared to certain other antibiotics, ACHROMYCIN provides more rapid diffusion; it is also more soluble, and, once in solution, more stable.

Truly, ACHROMYCIN has become a major weapon in the fight against disease.

ERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

*REG. U.S. PAT OFF.

President's Page

I want to take this opportunity to compliment Dr. T. W. McMeans and his committee for arranging the first annual ISMS Senior Student Conference which was held in Iowa City, May 14. In my opinion, this conference should be a major step toward bringing young physicians into medical organization in their early years of practice.

The program arranged by the committee should have given the senior students and their wives a better insight into some of the problems they will face when they enter practice and a better understanding of what they may expect from their state medical organization. Subjects discussed at the conference included medical public relations, advantages of rural practice, the business side of medicine and prepayment insurance, and there was an excellent presentation by Mrs. C. H. Flynn, president of the Woman's Auxiliary, on "What the Auxiliary Means to Organized Medicine."

The students and wives were guests of the ISMS at a banquet the same evening. Following the banquet, the students heard a discussion of the organization of the ISMS and a preview of what they can expect on entering private practice.

The ISMS is grateful to Dean Norman B. Nelson and the Executive Committee of the College of Medicine for making it possible for the Society to entertain on this occasion.

L. R. Coffin, M.D.
President

THE DOCTOR'S BUSINESS



Collect Your Accounts

MILLARD K. MILLS

WATERLOO

We should like to continue our discussion of procedures for collecting your accounts that we began, under this same title, in the April issue of the JOURNAL.

An occasional doctor still experiences a certain twinge of conscience when an effort is put forth from his office to collect his long unpaid fees. Yet we believe that the majority recognize it as their duty to treat all patients fairly, and it is unfair to the conscientious patient for some individuals to receive medical service free when they aren't entitled to it.

After establishing effective credit and collection policies, your next step should be to see that your assistant is qualified to discuss collections with patients.

THE MEDICAL ASSISTANT

The value of your secretary to your financial success cannot be overemphasized. James Bryan, in his current book "Public Relations in Medical Practice," states that among the positions open to women there is none in which they play a greater part "for better or for worse" in the success of their employers than in that of medical secretary! Think about that for a minute, doctor.

It will behoove you, then, to see that you have the best qualified girl available and that you pay her accordingly. An extra $25.00 per month may mean the difference between efficiency and carelessness, between harmony and discord in your office. It may also mean a difference of several hundred dollars in your monthly collections!

Besides the necessary business qualifications, be sure that the assistant you hire has a pleasant personality and an ability to talk with patients. There are not very many people who can express themselves well, and there are even fewer who can control a conversation and make the other person like it. If you have such a girl, you are indeed fortunate.

Then help her to understand what you want of her. Explain the importance of collections to her, and make her understand the need for her discussing finances with patients. Since there is little training available to prepare the medical assistant for her position, don't expect miracles from her until you have instructed her in the handling of her duties.

With the right medical assistant, you will be able to keep collections under control most of the time. For those accounts that have been delinquent for some time, she may be able to set up a telephone collecting system that will bring in some very unexpected payments.

USE THE TELEPHONE

A friendly telephone call after a patient has been sent several statements and letters may be just what it takes to collect the account. Have your secretary begin by saying, "Mr. Brown, we have sent you a number of statements and letters concerning your account, but haven't heard a word from you. Frankly, we are very much puzzled. Is something wrong, Mr. Brown?"

She will be understanding and cooperative, but she should also obtain from him a definite promise to pay before she hangs up. This promise should state how and when he intends to have the account paid in full. And if he fails to keep his agreement, she should be prompt with her follow-up. A good "re-call" system is essential.

If your policies are right and if you and your assistant are fulfilling your responsibilities as regards explaining and collecting your fees, there will be no reason for poor collections in your office.

Obviously, before any reliable financial program can be set up for your personal affairs, it is up to you to see to it that you are collecting the income to which you are entitled. You owe it to your patients, your family and yourself to give these matters careful consideration and to see that they are handled ethically and effectively.

Mr. Mills is general manager of Professional Management.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

MANAGEMENT OF ADDICTIONS, ed. by *Edward Podolsky*, M.D. (New York, The Philosophical Library, Inc., 1955. $7.50).

KINESIOLOGY OF THE HUMAN BODY (Under Normal and Pathological Conditions), by *Arthur Steindler*, M.D. (Springfield, Illinois, Charles C Thomas, 1955. $19.75).

SHOULD THE PATIENT KNOW THE TRUTH? A Response of Physicians, Nurses, Clergymen and Lawyers. Ed. by *Samuel Standard*, M.D., and *Helmuth Nathan*, M.D. (New York, Springer Publishing Company, Inc., 1955. $3.00 hard cover, or $2.00 soft cover).

PROLONGED AND PERPLEXING FEVERS, by *Chester S. Keefer*, M.D., and *Samuel E. Leard*, M.D. (Boston, Little, Brown and Company, 1955. $5.50).

BICKHAM-CALLANDER SURGERY OF THE ALIMENTARY TRACT, 3 vols., ed. by *Richard T. Shackelford*, M.D., assisted by *Hammond J. Dugan*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $60.00).

BOOK REVIEWS

MODERN TREATMENT YEARBOOK, ed. by *Sir Cecil Wakely*, K.B.E., C.B. (London, Bailliere, Tindall & Cox, Ltd., and Baltimore, Williams & Wilkins Co., 1955. $6.00).

Yearbooks are becoming increasingly popular in these days when numerous periodicals and articles are available to everyone. This volume, originating in Britain, differs from American ones that specialize in abstracting medical literature. It has 36 chapters that dip into many fields. The first eight deal with the antibiotics as they pertain to medicine, surgery, neurology, dermatology, tuberculosis therapy, venereal disease treatment, ophthalmology and urology. The effectiveness that one may expect from the various antibiotics in the infectious diseases of specific organ systems is discussed. The dosages recommended tend to be lower than those which we have learned to use in extravagant America.

The main body of the book consists of sections describing the modern management of disorders as unrelated as hepatitis, hyperemesis gravidarum, temporal arteritis and the depressive state. One of the most interesting is a chapter written in story form on the subject of Bornholm disease (epidemic myalgia).

If one is not seeking thorough coverage of any special field, there is much that he can learn from reading selected portions of this book.—*A. G. Lueck*, M.D.

ION EXCHANGE AND ADSORPTION AGENTS IN MEDICINE (The Concept of Intestinal Bionomics), by *Gustav J. Martin*, Sc.D. (Boston, Little, Brown and Company, 1955. $7.50).

Here is a text that goes into detail first on the subject of chemistry of the anion and cation exchange resins. Few of us have any idea of the mechanism of action of the resins, and for that reason we have used them improperly and ineffectively. We do know what therapeutic effect can be expected, but when it fails to take place, we don't know why. The author treats the matter in a way that provides an answer when we are puzzled.

The application of cation exchange materials is familiar to most practicing physicians, especially in the realm of congestive heart failure, where they are used for sodium depletion. Their effect on the body potassium, calcium, magnesium, chloride and acid base balance are intimately associated with the removal of sodium. The author supplies extensive groundwork for an understanding of these side effects. Their mechanism of action in cirrhosis, hypertension, nephrosis and the edema of pregnancy are also described. In a thought-provoking chapter on intestinal bionomics, the author airs his thoughts on the matter of autointoxication resulting from the formation of toxic chemicals by intestinal bacteria, especially in the aged.—*A. G. Lueck*, M.D.

THE LUNG (Clinical Physiology and Pulmonary Function Tests), by *Julius H. Comroe, Jr.*, M.D., *Robert E. Forster, II*, M.D., *Arthur B. Dubois*, M.D., *William A. Briscoe*, M.D., and *Elizabeth Carlsen*, A.B. (Chicago, The Year Book Publishers, Inc., 1955. $5.50).

Rare enough among medical publications today is the appearance of a small volume that is at once comprehensive and authoritative. Such a monograph has been prepared by Dr. Comroe and his associates at the University of Pennsylvania Graduate School of Medicine in order to bring to physicians an improved understanding of respiratory physiology.

As set forth in the preface, the objective is an "understanding of physiological principles and broad concepts, more than . . . technical completeness." With schematic drawings, the basic principles are elaborated in the first section; case presentations illustrating the application to specific clinical states comprise the second portion. An appendix, which forms part III, provides the mathematics of the major pulmonary mechanisms in readable form.

"This is not a primer," the authors frankly state. "A primer would not enable the physician to cope with some of the more baffling concepts, such as ventilation/blood-flow ratios, diffusing capacity, physiological dead space, distribution, compliance, alveolar ventilation or trans-pulmonary pressure. On the other hand, this is not an encyclopedia, and no attempt has been made to include all contributions in this small volume."

Altogether, this is a splendid achievement, appearing at a time when interest in respiratory physiology is intensified.—*Leon J. Galinsky*, M.D.

ADVANCES IN PEDIATRICS, ed. by *S. Z. Levine*, M.D., Vol. VII. (Chicago, The Year Book Publishers, Inc., 1955. $8.00).

This collection of papers on pediatrics includes discussions of such subjects as infantile cerebral palsy, phonocardiography, mucoviscidosis, congenital megacolon, malnutrition, the urinary tract in children and fibrous defects in the cortex of growing bones. The authors are highly respected, and the papers are of

high caliber. Their selection by the editor continues the series of volumes in a valuable manner.

Though some articles will be of more interest than others and though most of the subjects have received their first presentations elsewhere, they all serve as reviews of important bodies of material, and they integrate the new findings with earlier knowledge in ways that will add to their usefulness.—*M. E. Alberts,* M.D.

MENTAL ILLNESS

POPULAR MISCONCEPTIONS

Many doctors, as well as a very large number of lay people have some beliefs about mental illness and psychiatry that are fallacious. Psychiatrists themselves are in part to blame that for a long time undergraduate medical education included little about their specialty and that for a similarly long time they remained isolated from the general practice of medicine.

Following are a few of those common beliefs, together with the reasons why they are incorrect.

1. "Patients 'outgrow' mental and emotional illnesses." We all are occasionally subject to emotional strain and after brief periods throw off the symptoms that it has produced. But when symptoms persist in a patient, we must think of mental illness and the need for treatment. It is especially important that we do so when there seems some likelihood of either one of two entities—schizophrenia, the disease whose victims occupy 25 per cent of our hospital beds, and depression, a very common and often overlooked condition. Treatment for schizophrenia, if initiated within six months of the onset of the disease, leads to a fairly decent recovery rate, but when therapy has been delayed for a year, the rate is of minuscule proportions.

In depression, the important danger is suicide —now nationally the tenth most frequent cause of death. A very high proportion of depressed patients can be quickly, safely and painlessly relieved by electro-therapy. We need to diagnose early and treat promptly in these two conditions.

2. "Psychiatric patients are dangerous." In the overwhelming majority of cases *this is just not so.* About three-fourths of psychiatric patients are not psychotic, and of the remainder who are, very few are so disturbed in their behavior as to mark them off from the usual run of general hospital patients. Few of them are as disturbed as the delirious pneumonia patient or the senile patient after transurethral prostatectomy.

Those who are disturbed can be handled easily in the general hospital by means of drugs such as the old standby paraldehyde and the new and very effective Thorazine.

3. "Psychiatrists are mind readers (and don't require a history)." Obviously, this is a mistaken idea. Psychiatrists have a special need for good histories from referring physicians, since those obtained from their patients are likely to be inaccurate. The author of these observations recently missed a serious condition because the patient withheld information and because the referring physician, though he knew it, neglected to pass it along.

4. "The important thing is to get the patient to a psychiatrist by hook or crook." This statement doesn't sound like a fallacy, but it is if it means that there is no reason why deception shouldn't be practiced in getting a patient to visit that sort of specialist. The utmost of cooperation from the patient is essential in all sorts of psychiatric treatment other than electro-therapy and insulin therapy. Psychotherapy cannot be poured down the patient's throat from a bottle. The individual who is taken to a psychiatrist by subterfuge—by being told that he is to be given a "physical check-up," for example—is not prepared to give the necessary cooperation, and the relationship may then get started on the wrong foot. The proper basis may never be attained. Thus, honesty is the best policy even with the disturbed patient.

5. "Nervous troubles are usually neurological." Instead, most nervous troubles are emotional disturbances and come within the province of the psychiatrist. Lay people are able more readily to accept the idea that their own or a relative's trouble is emotional when reassurance is given them that there is no question of "insanity" (a legal, not a medical term) or of malingering. And they need to be convinced that such difficulties are not to be dismissed with offhand phrases such as "It's all in your head," or "Go home and forget it."

6. "Psychologists and psychiatrists are the same thing." This fallacy is a dangerous one. Psychologists have had no medical training, cannot differentiate diagnostic entities, cannot evaluate physical symptoms and are unfitted to treat illness without supervision. The Code of Iowa (Medical Practice Act) expressly includes the treatment of nervous and mental diseases under the practice of medicine. Patients with these ailments require the care of competent physicians.

JUNE CLINICS IN DENVER

The Seventh Annual Summer Clinics of the Denver Children's Hospital will be held on June 22, 23 and 24, 1955. The guest speakers will include Dr. William C. Deamer, a San Francisco pediatrician; Dr. John Caffey, a New York City radiologist; and Dr. C. Everett Koop, a Philadelphia surgeon.

Complete programs and registration blanks can be had on request.

Iowa Academy of General Practice

WHO ARE QUALIFIED?

Many hospital staffs are confronted with the question, "Who may do surgery in the hospital?" This question is answered by Kenneth B. Babcock, M.D., a director of the Joint Commission on Hospital Accreditation. Dr. Babcock says: "There is no specific answer to the question. Good surgery cannot be measured by years of residency, preceptorships, or number of operations assisted at or performed."

He notes that residences, specialty society memberships and board certifications are among the criteria to be considered prior to the granting of staff privileges, but, he says, "The frank, brutal truth remains that they sometimes, though not often, are only pieces of paper; that time can warp a man's judgment, and that poor health can slow the facilities of a surgeon's hands until he becomes a dangerous man in the operating room. Merit alone is the criterion for judging physicians' surgical abilities. This judgment should be performed by those who are willing to accept the responsibility and to attest to the public and community that 'in our judgment this man is capable of doing good surgery.'

"In our present medical set up, this means that the staff surgeon should be judged by those other members of the staff who have seen him work, use his judgment and exercise his ability. It becomes a local personal equation in every hospital. It is a terrific responsibility. It can never be decided on a friendship, personality or class basis."

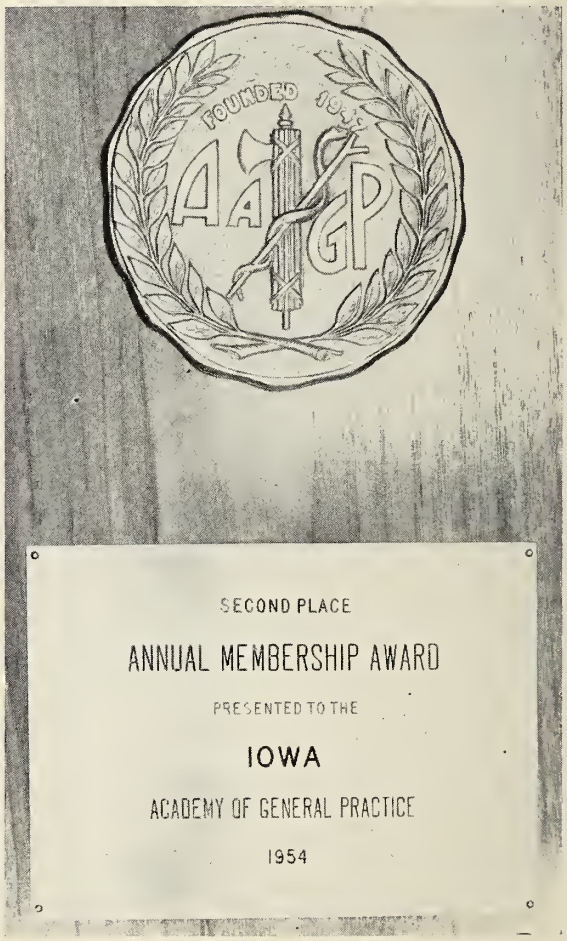
Dr. Babcock has certainly made a clear presentation and has opened the way for deciding what new men may do surgery. Also, he has set a standard for those now doing surgery as a specialty. This should remove from the ranks of surgeons those known to be unqualified.

It must be remembered that surgery is not the only service for which a clarification of qualifications is necessary. In Dr. Babcock's statements one could substitute the name of any other specialty or group without lessening their validity. Those practicing a definite specialty should not deviate from that specialty and do work for which they are not trained.

It will become necessary for doctors to be judged, but let them be judged by men from their own group. If this rule is followed, definitely unfair circumstances can be avoided. Likewise, the family physician should be judged by his group.

I.A.G.P. ANNUAL SESSION

The annual scientific assembly and business meeting of the Iowa Academy of General Practice will be held at the Hotel Savery, Des Moines, on September 15 and 16, 1955. The program will consist of timely subjects that are interesting and valuable to the general practitioner as well as to any other doctor who wishes to attend. Make your arrangements and hotel reservations now!



MEMBERSHIP AWARD

This beautiful second-place plaque was presented to the Iowa Academy of General Practice at the State Officers' Conference in Los Angeles. The award was based on a composite of (1) total increase in members during the year, (2) greatest percentage of increase, and (3) percentage of total general practitioners in the state.

We are proud to receive this recognition from our national organization.

MERITORIOUS SERVICE AWARDS



Jeannette Dean-Throckmorton, M.D.



Conreid R. Harken, M.D.

Presentations of meritorious service awards were made during the 1955 Annual Meeting to three individuals, two of whom are physicians and members of the Iowa State Medical Society, and one was presented to the Iowa State College television station.

The first of the recipients was Jeanette Dean-Throckmorton, M.D., the librarian of the Iowa State Medical Library. The citation read to her was, in part, as follows: "In your capacity as librarian . . . you have responded without hesitation to physicians' requests for medical source material. Your cooperation and helpful suggestions have undoubtedly made possible the completion of many worthwhile scientific papers. It is well recognized that your untiring efforts have contributed to building and augmenting the medical library into a facility which is of tremendous service to Iowa physicians."

The second was Dr. Conreid R. Harken, of Osceola. His citation said, "The Board of Trustees of the Iowa State Medical Society is pleased to present to you this Award of Merit in appreciation for your years of service to the State Society. Your loyal and devoted service to organized medicine in Iowa has played an important role in the progress of medicine."

That award was the first of two gratifying experiences afforded to Dr. Harken during the course of this year's Annual Meeting. At the final general session, on Wednesday morning April 27, he was offered and accepted an opportunity to introduce his son, Dr. Dwight E. Harken, associate clinical professor of surgery at Harvard, who lectured on "Useful Heart Operations."

The third person to whom the Trustees presented a commendation was Mr. Art Heusinkveld, a staff writer for the Cedar Rapids GAZETTE. The letter of commendation praised him for "objective reporting of the hospital-physician controversy" in four articles that were printed in the Cedar Rapids paper on September 19, 20, 21 and 22, 1954, and complimented the publishers for sponsoring them.

In their letter of appreciation addressed to the manager of Station WOI-TV, the Trustees of the State Medical Society said that they wished "to pay tribute to the management . . . for making possible the presentation of the 'Your Health' series."

"WOI-TV," the letter continued, "is to be commended for its fine cooperation in bringing worthwhile health information to the people of central Iowa. We are especially grateful to Mr. Ray Stewart, who has produced these programs, and to Mr. LaMar Smith, who has directed them."

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

POLIOMYELITIS AND THE SALK VACCINE

As of May 6, Iowa's counties were completing their first injections of the Salk poliomyelitis vaccine. After a delay in starting the program due to belated arrival of the vaccine, the first Iowa clinic for children in the first and second grades began at 10:00 a.m. on Tuesday, April 26, in Cherokee County. The 132,000 cc's of vaccine shipped from Parke, Davis & Co., Detroit, arrived in Des Moines on Monday, April 25, at 10:30 a.m. By 3:30 that afternoon it was all repackaged according to the number of eligible children registered to receive it and was on its way to the counties of destination.

Speedy distribution to the 99 counties was made possible through the active cooperation of the Iowa National Guard and the Iowa State Highway Patrol. Five trucks belonging to the National Guard Medical Corps carried it to the district offices of the State Highway Patrol. The Highway Patrol then distributed the vaccine to the counties in each of its districts. The press alerted the counties, with the result that finding the physician to whom the vaccine was consigned was easy.

Registration of children in the program varied from 95 per cent to 100 per cent. Audubon County had 730 children listed as eligible, but signed registrations for 735 children forced a recount, which revealed that the latter number was accurate and that all were "in good standing."

NATIONAL SCARE HAD SLIGHT EFFECT

Summaries sent by the counties after completion of the first injections indicate that the scare occasioned by the possibility of association between some cases of poliomyelitis and the use of the Cutter vaccine caused very few withdrawals in Iowa. Linn County reported 173 absences due to illness, for each of which make-up requests had been received from the children's parents. There were only 12 withdrawals. No county has reported more than 2 per cent withdrawals. One county, Jackson, decided to delay injections for one week to "let the confusion clear itself."

Most counties have accepted the two-week interval between first and second injections. This interval was chosen in most instances because it permitted completion of the program before the closing of the rural schools. Plans for conducting the third injection, now to be delayed for seven or more months according to Dr. Salk's advice, have not been formulated in any county. It is anticipated, however, that these third injections will be carried out entirely by arrangement between individual physicians and the parents of the children.

PRIORITIES

In February, the Poliomyelitis Committee of the Iowa State Medical Society agreed with the State Department of Health that physicians should be requested to use the commercial vaccine for their patients in the age groups most susceptible to poliomyelitis as long as the supply remained limited.

POLIOMYELITIS CASE RATE BY AGE
IOWA 1945-1954
RATE PER 100,000 ESTIMATED POPULATION

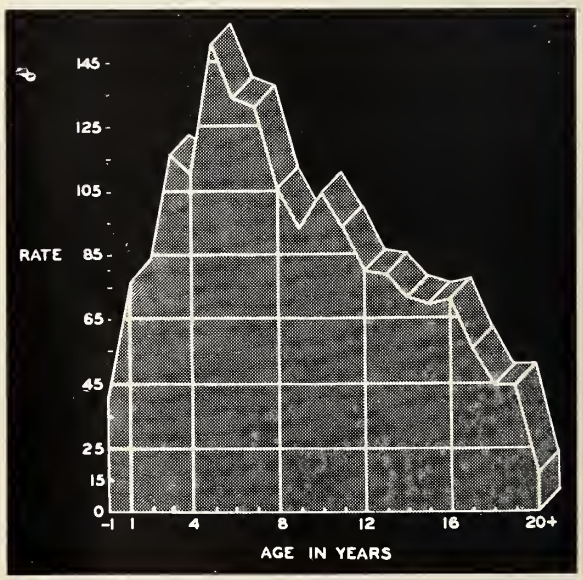


Figure 1

Since the program of the National Foundation for Infantile Paralysis included children of ages 6 and 7 at the peak of the poliomyelitis incidence curve, all of the advisory groups suggest that the next

priorities be accorded to children in kindergarten and in third grade. Since pregnant women whose babies are to be born during the poliomyelitis season may be expected to have much higher attack rates than non-pregnant women of the same age group, they are also listed as a priority group.

TABLE 1

IOWA POLIOMYELITIS CASES BY AGE, 1945-1954

Age	Cases	Rate per 100,000 Estimated Population — *Rate per 100,000 Est. Pop.*
–1	235	41.6
1	453	76.6
2	499	84.4
3	614	116.4
4	581	110.1
5	689	150.9
6	625	133.8
7	585	131.0
8	474	106.1
9	414	
10	420	104.8
11	372	92.8
12	317	79.1
13	314	78.3
14	278	71.5
15	259	69.2
16	256	70.2
17	202	55.4
18	165	44.7
19	165	44.7
20 & over	2,802	16.2
Total	10,719	
Age not stated	336	
Grand Total	11,055	42.2

The new advisory Poliomyelitis Vaccine Committee appointed by the Governor approved those priorities at its first meeting, on Monday, April 25.

POLIOMYELITIS CASE RATE BY AGE GROUP
IOWA 1945-1954
RATE PER 100,000 ESTIMATED POPULATION

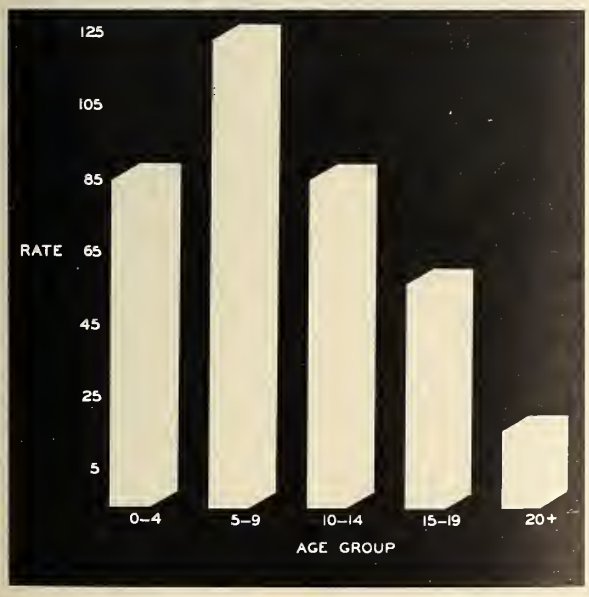


Figure 2

ADDITIONAL INFORMATION REQUESTED

Dr. Ralph H. Heeren, director of the Division of Preventable Diseases of the State Department of Health, has forwarded to the administrators of all Iowa hospitals a request from the federal Department of Health, Education and Welfare for more nearly complete information on poliomyelitis cases than has been asked for previously.

Though the State Department's communicable-disease card does not contain lines or parts of lines on which physicians can report all of the newly requested data, it is essential that all of the following information be furnished: (1) Name, (2) Age, (3) Sex, (4) Residence, (5) Date of onset of symptoms, (6) Date and site of first paralysis (If no paralysis, state that the case is non-paralytic), (7) extent of paralysis, (8) whether or not inoculated with vaccine, (9) date of inoculation, (10) manufacturer of the vaccine, (11) log number, and (12) site of inoculation.

The State Department of Health has been asked

TABLE 2

POLIOMYELITIS CASES BY MONTHS

	1952	*1953*	*1954*	*1955*
January	1	7	1	9
February	3	5	9	5
March	2	2	4	1
April	4	4	7	9
May	6	14	6	
June	47	21	26	
July	340	59	225	
August	1,260	248	337	
September	1,034	123	457	
October	664	69	270	
November	168	39	80	
December	35	22	23	
	3,564	613	1,445	

TABLE 3

Ages of May cases above years:

Age	2	1 case
	6	1 case
	8	1 case
	9	2 cases
	10	3 cases
	11	1 case
	12	2 cases
	14	1 case
	15	2 cases
	16	1 case
	25	4 cases
	31	1 case
	59	1 case
No Age	—	2 cases
		23

TABLE 4

New Cases Week April 30,

1953	*1954*	*1955*
0	0	4

Total Same Week

1953	*1954*	*1955*
18	21	24

to telegraph a report of each new case to the National Communicable Disease Headquarters at Atlanta, Georgia. For that reason, it is essential that reports be sent by physicians on the date of onset of the disease or as soon thereafter as is possible.

TABLE 5
IOWA POLIOMYELITIS DEATH RATES, 1945-1954

Year	Deaths	Rate per 100,000 Estimated Population Rate
1945	25	1.0
1946	53	2.0
1947	8	0.3
1948	81	3.1
1949	90	3.4
1950	65	2.5
1951	22	0.8
1952	165	6.3
1953	28	1.1
1954	58	2.2

POLIOMYELITIS DEATH RATES
IOWA 1945-1954
RATE PER 100,000 ESTIMATED POPULATION

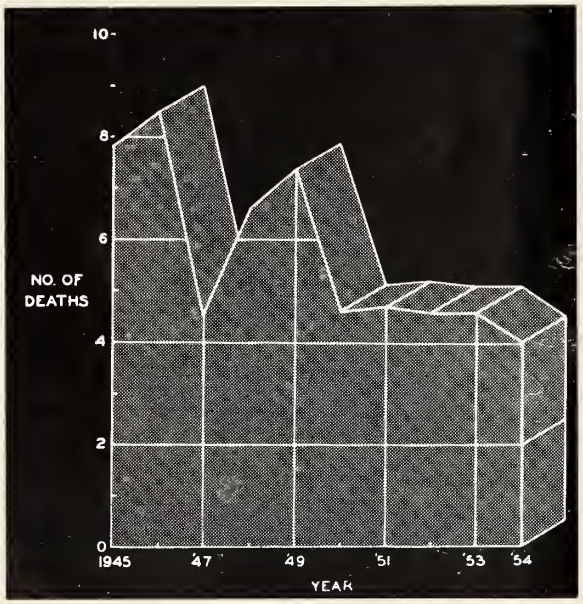


Figure 3

TABLE 6
IOWA POLIOMYELITIS FATALITY RATES BY AGE GROUP, 1945-1954

Age	Deaths per 100 Cases: Cases	Deaths	Deaths per 100 Cases
-1	235	15	6.4
1	453	7	1.5
2	499	11	2.2
3	614	18	2.9
4	581	10	1.7
0- 4	2,382	61	2.6
5- 9	2,787	115	4.1
10-14	1,701	88	5.2
15-19	1,047	62	5.9
20 & over	2,802	269	9.6
Not Stated	336		
Total	11,055	595	5.4

POLIOMYELITIS CASE FATALITY RATE
IOWA 1945-1954
DEATHS PER 100 CASES

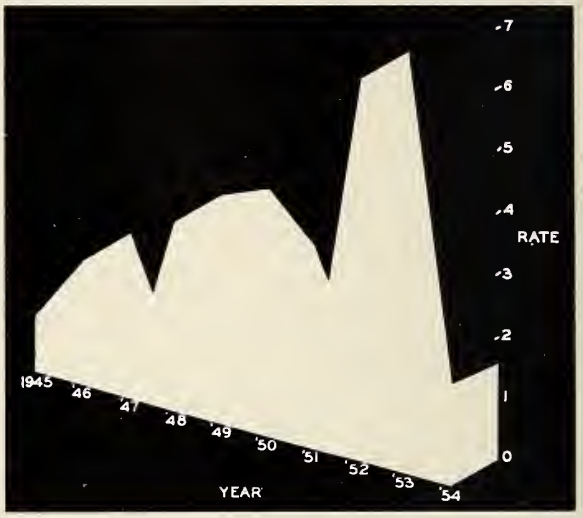


Figure 4

TABLE 7
IOWA POLIOMYELITIS CASE FATALITY RATES, 1945-1954

Year	Deaths per 100 Cases: Cases	Deaths	Deaths per 100 Cases
1945	320	25	7.8
1946	620	53	8.5
1947	176	8	4.5
1948	1,236	81	6.6
1949	1,217	90	7.4
1950	1,399	65	4.6
1951	465	22	4.7
1952	3,564	165	4.6
1953	613	28	4.6
1954	1,445	58	4.0
TOTAL	11,055	595	5.4

MORBIDITY REPORT

Disease	1955 Apr.	1955 Mar.	1954 Apr.	Most cases reported from these counties:
Diphtheria	0	0	0	.....
Scarlet Fever	142	115	212	Clay, Clinton, Des Moines
Typhoid Fever	2	4	1	Polk, Scott, one each
Smallpox	0	0	0	.....
Measles	2240	1552	2227	Des Moines, Muscatine, Polk, Scott
Whooping Cough	160	86	10	Dubuque, Pottawattamie, Scott
Brucellosis	28	9	13	Black Hawk, Cedar, Dubuque
Chickenpox	679	720	1187	Linn, Polk, Pottawattamie, Scott
Meningococcus Meningitis	1	8	3	Cerro Gordo
Mumps	1039	1121	1091	Clinton, Dubuque, Polk, Pottawattamie
Poliomyelitis	9	1	7	Linn 3, Polk 3, Clay, Wayne, Woodbury, one each
Infectious Hepatitis	102	164	495	Clayton, Polk, others scattered
Rabies in Animals	44	13	45	Hancock, Plymouth, Woodbury
Tuberculosis	51	33	63	For the State
Syphillis	120	78	110	For the State
Gonorrhea	39	39	53	For the State

WOMAN'S AUXILIARY NEWS

Mrs. Keith M. Chapler, *Publications Chairman,* Dexter, Iowa
President—Mrs. Charles H. Flynn, 709 W. 15th St., Clarinda
President-Elect—Mrs. Dean H. King, Spencer
Secretary—Mrs. Robert P. Mason, 5818 Chamberlain Drive, Des Moines 12
Treasurer—Mrs. E. A. Vorisek, 6205 Woodland Rd., Des Moines

TWENTY-SIXTH ANNUAL MEETING

The twenty-sixth Annual Meeting of the Woman's Auxiliary to the Iowa State Medical Society opened with a pre-convention Executive Board meeting at the Savery Hotel, Des Moines, on Sunday afternoon, April 24, 1955. The president, Mrs. Lester R. Hegg, of Rock Valley, presided at all sessions. The Board members and their husbands enjoyed a Dutch treat supper at the Des Moines Golf and Country Club afterward.

The meeting on Monday began with a ten o'clock brunch honoring district councilors and county Auxiliary presidents. Also present were 86 girls from Future Nurses clubs throughout Iowa. Mrs. E. A. Larsen, of Centerville, chairman of Nurse Recruitment, introduced the group. She arranged a special program and luncheon for the girls and a tour of Mercy Hospital, with a tea at the Nurses' Home there.

WORLDWIDE NEED FOR NURSES

Mrs. C. M. Hipwood, R.N., gave an address "Nursing in Other Lands," which was profoundly inspiring not only to the Future Nurses but to everyone else who heard it, because of her complete dedication to her work and her impressive knowledge of her subject. She has served in three Asiatic countries.

She stressed the terrific need for doctors and nurses in foreign lands. There are only 7,000 R.N.'s, she said, to minister to a population of 380,000,000 in India, and there are only two university schools of nursing there. The few doctors are seriously handicapped because of the lack of nurses.

She was realistic in her comments to the Future Nurses. She stated that the glamor of nursing is not in starched white uniforms; not in fabulous salaries; not in working by the clock. Her own pay and that of all other dedicated women in the field has consisted principally of the satisfaction that is derived from the work and of related blessings. The world looks to America, she said, not only for medical leadership and aid, but also for nurses. Nurses are needed not only in Iowa, not only in the rest of the United States, but all over the remainder of the world!

REPORTS OF OFFICERS AND COMMITTEES

Following Mrs. Hipwood's talk, Mrs. Dean H. King, of Spencer, first vice-president, gave a brief summary of the work of the Iowa Committee on Careers. All information relative to entrance into nurses' training is now obtainable in packets from Mrs. Hazel Lammey, administrative secretary of the Auxiliary to the Iowa State Medical Society, 529-36th Street, Des Moines 12. Already, 1,000 requests for these packets have been received.

Mrs. W. H. Longworth, of Boone, reported that $2,939.50 had been lent to girls in nurses' training and that there was a balance on hand in the Loan Fund of $2,116.82.

Mrs. Elmer A. Vorisek, Des Moines, acting as treasurer in the absence of Mrs. H. H. Smead, stated that the balance in the treasury on March 3, 1955, was $3,600.76. Mrs. W. B. Chase, Jr., budget chairman for 1955-1956, proposed a budget calling for the expenditure of $2,850.00, and it was adopted.

Mrs. J. F. Gerken, of Waterloo, second vice-president, moderated a panel on publications which included short explanatory talks by the state chairmen on the magazines and leaflets. Mrs. F. B. Leffert, of Centerville, discussed the BULLETIN, Mrs. D. C. Sharpe, of Dubuque, explained the HANDBOOK. Mrs. R. H. Moe, of Griswold, reported on sales of TODAY'S HEALTH in Iowa as related to the national contest. She had received a telegram from National stating that Iowa's percentage was 88 to date, the highest sales average that our state has ever had. Mrs. K. M. Chapler, of Dexter, reviewed publication requirements for the WOMAN'S AUXILIARY NEWS.

Mrs. W. A. Seidler, of Jamaica, chairman of Revisions, read the proposed new constitution and by-laws, and they were adopted, after some minor changes had been made.

The Nominating Committee for 1956 was elected by written ballot. The members are Mrs. K. M. Chapler, chairman, Mrs. R. P. Mason and Mrs. J. A. Downing, both of Des Moines, Mrs. J. C. Decker, of Sioux City, and Mrs. M. O. Larson, of Hawarden.

Members of the Auxiliary enjoyed tea and a

tour of the Iowa Society for Crippled Children and Adults Center following the business meeting. Arrangements had been made by Mrs. H. C. Merillat, of Des Moines, chairman of Handicapped Work.

ELECTION OF OFFICERS

On Tuesday morning, April 26, the following officers were elected for 1955-1956: president-elect, Mrs. Dean H. King, of Spencer; first vice-president, Mrs. James F. Gerken, of Waterloo; second vice-president, Mrs. H. C. Merillat, of Des Moines; secretary, Mrs. R. P. Mason, of Des Moines; and treasurer, Mrs. E. A. Vorisek, of Des Moines. The councillors chosen were: first district, Mrs. D. C. Sharpe, of Dubuque; fifth district, Mrs. A. E. Acher, of Fort Dodge; eleventh district, Mrs. E. C. Petersen, of Atlantic.

Mrs. D. O. Bovenmeyer, of Ottumwa, presented the memorial for members deceased during the past year. With a background of organ music, she read selections from the poetry of Patience Strong and named the following: Mrs. Ralph W. Parker, of Des Moines; Mrs. J. G. Gaumer, of Fairfield; Mrs. D. T. Rambo, of Ottumwa; Mrs. C. B. Taylor, of Claremont, California (formerly Ottumwa); and Mrs. H. F. Clark, of Stuart.

Mrs. H. W. Smith, of Woodward, stated that the memorial plaque listing names of the deceased in whose memory doctors, their wives and friends have contributed to the Nurses' Loan Fund has been completed. In the future, the names will be entered in a permanent loose-leaf record, and special recognition will be given the donors at each Annual Meeting.

REPORT ON LEGISLATION

Dr. F. C. Coleman, of Des Moines, chairman of the Legislative Committee of the Iowa State Medical Society, addressed the convention on "Important Legislation." He discussed the bills that had been considered and either rejected or passed at both national and state levels.

Following Dr. Coleman's address, members of the Auxiliary from the Sixth District presented a delightfully amusing musical skit entitled "There's a Doctor in the House."

PRESIDENT'S LUNCHEON

Special guests at the president's luncheon were Dr. G. V. Caughlan, president of the Iowa State Medical Society; Dr. L. A. Coffin, president-elect of the Iowa State Medical Society; Drs. W. L. Downing and O. D. Wolfe, members of the Woman's Auxiliary Advisory Board; Dr. R. F. Birge, secretary of the Iowa State Medical Society; Mr. D. L. Taylor, executive secretary of the Iowa State Medical Society; Dr. Charles H. Flynn; Dr. Elmer Hess, president-elect of the American Medical Association; and Mrs. C. R. Pearson, of Baraboo, Wisconsin, national chairman of Nurse Recruitment. Organ music was furnished during the luncheon by Mrs. Eugene Smith. An invocation solo, "The Lord's Prayer," was sung by Mrs. C. W. Losh, accompanied by Mrs. H. C. Merillat.

Dr. Caughlan congratulated the Auxiliary on the acquisition of 170 new members and four new county chapters. He said he was impressed with the Auxiliary's progress in nurse recruitment, service to the handicapped, sale of TODAY'S HEALTH and fine contributions to the improvement of medical public relations. He recommended that civil defense be studied seriously.

Dr. Hess pointed out that the functions of a doctor are to alleviate suffering, to save lives, to pass on his knowledge to his professional brothers and to receive an honorarium for his labors. Medicine practiced for money only, he declared, is bad medicine. A good doctor merits the affection of the whole community that he serves. Doctors' wives, in Dr. Hess's opinion, need great depth of character if they are to be ideal mates for their husbands. "Medicine without spiritual values," he declared, "can be the greatest racket in the world."

Mrs. Pearson discussed "Auxiliary Activities in the Preservation of Democracy." She stressed the necessity of seeing the other person's point of view and of extending one's outlook from local to national. She referred to Oliver Wendell Holmes' definition of the various types of intellect: first, the person who is acquainted only with facts; second, the person who knows facts and puts them to work; third, the person who not only knows and works, but has vision and a "skylight" for future possibilities. She said that when Jesus said "I am the vine," he was referring to a grapevine, and we must remember that grapes come in clusters. Therefore we must cling together, for no man is strong enough to stand alone.

Mrs. H. W. Smith gave special recognition to Mrs. K. M. Chapler who recently resigned as chairman of Publications after 13 years of service. She presented her a lovely sterling silver bowl on behalf of the Auxiliary. Mrs. J. M. Bruner, of Des Moines, gave a most entertaining report on the current New York theater.

Exhibit awards were presented to Polk, Grundy and Sioux counties and achievement awards to Polk, Wapello and Clay.

There were 229 members who registered for the Annual Meeting. The following past presidents attended: Mrs. W. A. Seidler, of Jamaica; Mrs. J. A. Downing, of Des Moines; Mrs. E. T. Warren, of Stuart; Mrs. W. R. Hornaday, of Des Moines; Mrs. F. W. Mulsow, of Cedar Rapids; Mrs. J. C. Decker, of Sioux City; Mrs. S. S. Westly, of Manly; Mrs. Fred Moore, of Des Moines; Mrs. A. G. Felter, of Van Meter; Mrs. H. W. Smith, of Woodward; Mrs. L. A. Coffin, of Farmington; and Mrs. E. B. Hoeven, of Ottumwa.

INAUGURAL ADDRESS

Not one of us who accepts the responsibilities of serving as president of an important organization such as our State Medical Society Auxiliary feels that she fully merits the honor conferred upon her, and I am no exception. The confidence you have manifested in my ability to serve as your president makes me feel very humble. I thank you for the honor and assure you of my desire to justify your choice.

We, the officers whom you have elected, pause a moment to look back and say "thank you," as well, to the many devoted women who have served in like positions during the struggling years of our Auxiliary's infancy. We accept with pride the heritage of 26 years of experience. We hope that we may, in some small measure, contribute to the organization's continued growth and achievements.

The woman of today has greater opportunity for self-realization than did her predecessors. In the 1800's a woman wearing literally pounds of skirt was downright physically limited in her efforts. More importantly, she had little freedom of choice in her activities and was not expected to be interested in anything outside her own home. With the advent of the twentieth century, and with less raiment to hinder her action, she has become independent. Her opportunities now depend solely on her abilities. Today, she meets the responsibilities of home and family with calmness and efficiency, and serves her community as well. The economic and social changes during the past decade have contributed much to the new status of womanhood. Many women have continued in careers after marriage, and some have finished their formal education.

We can join hands with our physician husbands and walk down the medical lane together, sharing with them the joys and the heartaches which accompany the practice of medicine. When, as doctors' wives, we do some volunteer work in our Auxiliary, which has many aims in common with the Medical Society, we develop a broader interdependency and a richer, fuller and more enjoyable life together. As doctors' wives, it is our responsibility to help our husbands keep alive the idealism and the longing to serve mankind which prompted them to study medicine. We must be unselfish, for as our husbands give more of themselves in their service to ailing patients, they have less time to spend with us. We must accept with equanimity the many changes in family plans that their responsibilities necessitate, and we must be prepared to offer the explanations that must be made to disappointed children. But despite the difficulties, there is an invaluable reward for our performing the role of doctor's wife. It is the privilege of sharing in and being a part of the greatest of all humanitarian professions.

With my acceptance of this honored office, I give you, the Auxiliary membership, my pledge of loyalty and service. I give you my faithfulness, consideration and gratitude. Rather than being ambitious for myself, I am ambitious for our Auxiliary and for its objectives.

Our program will be one of continued and diligent service to the Iowa State Medical Society and the American Medical Association. Our major goals will be a continuation and improvement of the many fine and worthwhile projects under our sponsorship, and our minor goals will be the improvement of cultural and recreational facilities in our home communities.

Because the American people are avid readers of every article on health that is published, it behooves the physician's wife to be informed on all subjects. She should be able to discuss health subjects intelligently and accurately, and to correct false impressions for the benefit of her husband's practice and of the medical profession as a whole. She should subscribe for and read the medical profession's authoritative magazine for laymen, TODAY'S HEALTH. She should send subscriptions to her friends as Christmas gifts, and, in particular, she should give subscriptions to the new mothers among her acquaintances.

You will find material and articles of incalculable value in the national Auxiliary's BULLETIN. Subscribe for it. The HANDBOOK is a must for all officers and committee chairmen of the county and state Auxiliary and may be purchased for 35c.

Our Organization Committee is the foundation upon which all other activities are built. Help the Organization chairman and the councilor of your district by securing new members and by volunteering your services in the planning and supporting of district meetings. Money in itself is not a vital thing, yet when used to promote a program of health education it becomes vital. Each year our Auxiliary program becomes more extensive, a fact which shows that we are progressing. Let us increase our membership this year, in part at least to swell our bank balance, for we must have money to use, along with the energy and enthusiasm of our members, to promote our program. Let us work toward the day when every eligible doctor's wife will be a member and when there will be an Auxiliary assisting every county medical society.

Forget not your obligation to Community services such as the American Red Cross organization and its volunteer services. Offer your assistance as leaders on community councils and boards, for by such participation we help to build good public relations for the doctors in the community, for the county and state medical societies and for our own county and state Auxiliaries.

Keep yourselves informed about health legislation, and encourage other Auxiliary members and their families to exercise the privileges of their

American citizenship. Help the doctors in their efforts to prevent the Federal Government from subsidizing our schools of medicine. Give generously to the American Medical Education Foundation, and encourage the establishment of memorial gifts to it. What better way could a doctor be honored than by a contribution, made in his name, to a Medical School, thus benefiting future doctors? A bereaved family could ask the newspapers to mention that whoever wishes to give a memorial to their doctor should make a donation to the American Medical Educational Foundation. Encourage your husband to support the Iowa State Medical Society Loan Fund for our own State University Medical School and also to avail himself of the many fine extension courses offered for postgraduate work at Iowa City.

Continue your splendid support of Future Nurses Clubs and the loan fund. Give more than fifty cents per member if you can. Encourage your county Future Nurse Clubs to sell subscriptions to TODAY'S HEALTH in order to earn funds for projects and field trips. Suggest that your county auxiliary make awards to students who have passed pre-nursing aptitude examinations and have been accepted and enrolled in approved schools of nursing. Present this award to the recipient at the high school awards ceremony.

Send working materials to the Handicapped Committee, or, if your community is one of the larger ones, sponsor a sale.

Participate in and sponsor teen-age safe driving clubs in the high schools. Publish articles in your home town papers on, "Safety in the Home," etc. Safety is not a matter of "Every man for himself." It means looking out for the other person as well, and doing everything in one's power to prevent accidents to others, from whatever cause.

The Medical Auxiliary can do an outstanding job in public relations by sponsoring a baby sitters' training course in which basic facts of hygiene, routine care and care of infants and children are taught. Take an active part in the pre-school round up.

By working closely with your county Medical Advisory Committee, you can increase your group's prestige and usefulness to the Medical Society. When a county medical society elects its new officers, a letter of congratulations from the Auxiliary, offering our cooperation at all times, may promote an awareness of our willingness to be of service to medicine. Invite the new president of the medical society to bring greetings to the first fall meeting of the Auxiliary each year. The occasion of his visit will give you an opportunity to offer your help, and it will give him a chance to outline his plans for the year to you. Ours is an Auxiliary to the medical profession, not just another woman's club.

The varied program of the Auxiliary makes it possible for one member to choose among many fields in which she might contribute. It may be something for which she is already trained or something in which she has a vital interest. We solicit and welcome volunteer participation on our state committees and wish to encourage you to offer your services.

During my tenure of office as president I would like to see more active work in smaller communities on civil defense and study groups for home preparedness in the event of disaster. And I should like to see more women over 16 receiving the training in home care of the sick offered by the American Red Cross.

I would like to see continued work in setting up constructive mental health programs throughout the state, and the familiarizing of Auxiliary members with the needs and the facilities already in existence for the mentally ill. My wish is to have more assistance from the district councilors of the Medical Society in interesting the physicians and their wives in organizing new Auxiliaries.

It would be nice to see active participation in the celebration of Doctor's Day throughout the state, prolonged illness and death notices sent to the courtesy committee and permanent record files for the Auxiliary compiled by the Archives and Historical Committee and kept in the State Medical Society office building. Historical data is valuable in research and serves as a guide to the future. Nothing is dead in the past, for the man who studies what has happened in the past helps to make the world what it is today.

May I, as your president, suggest that the county Auxiliaries have the election of officers and dues paying by the first of March each year if at all possible? This would facilitate the work of the state treasurer a great deal and keep Iowa properly credited on membership for the National's year. Your state officers are ready and willing to serve you. Please call upon them for any assistance they may render.

If we cannot answer your inquiry, we will direct it through the proper channels for an answer. If each of us would resolve to do one specific thing for the auxiliary this next year, the height of our aspirations could be reached.

I trust that your new officers will merit the same considerate cooperation from the total membership that has been accorded to those preceding us in these state positions. As Mrs. George Turner has said, "Let us dedicate ourselves to our auxiliary and may our efforts be rewarded by the confidence and trust of the people and the appreciation and admiration of the medical association to which we are auxiliary."

I should like to close with a very special "Thank You" to my wonderful husband and partner who is always by my side giving words of encouragement and showing needed patience when I am away from home because of Auxiliary affairs.

MRS. CHARLES H. FLYNN, *President*

GENERAL PRACTITIONER OF THE YEAR

Dr. E. J. Watson, 78, of Diagonal, was chosen General Practitioner of the Year at the meeting of the House of Delegates of the Iowa State Medical Society on Wednesday morning, April 27, 1955. He is now in his fifty-first year of practice in Ringgold County.

Dr. Watson was graduated from the medical college in St. Joseph, Missouri, in 1904, and during that same year began work in the section of Diagonal which then was the separate town of Knowlton. He served on school boards at Arispe, Knowlton and Diagonal from 1904 until 1938, being president of the two latter for 12 and 18 years, respectively. He was Ringgold County coroner for 18 years. An enthusiastic supporter of Diagonal High School athletic teams (Diagonal won the state boys' basketball tournament in 1938), he has served as their physician without pay for more than 25 years.

Residents of Dr. Watson's community showed their regard for him last June 15, when they held a day-long celebration in honor of his completing 50 years as their physician. About 2,000 attended a parade and banquet on that occasion. One of the letters supporting his nomination for G-P of the Year said, "There may be a fancier term, but folks here think of him as the family doctor. . . ."

Previous winners of the award have been Drs. A. E. Wanamaker, of Hamburg, C. A. Henry, of Farson, Pierre Sartor, of Titonka, and J. K. Chittum, of Wapello. Dr. Watson's name will be placed in nomination for the nation's outstanding general practitioner, who will be selected at the June meeting of the AMA, in Atlantic City.



E. J. Watson, M.D.

Coming Meetings

In State

Sept. 15-16	Annual Meeting, Iowa Academy of General Practice, Des Moines
Oct. 13-14	Joint Meeting, Mississippi Valley and Iowa Trudeau Societies, Des Moines

Out of State

June 1-5	Am. Col. of Chest Physicians, Ambassador Hotel, Atlantic City, N.J.
June 1-4	Am. Proctologic Soc., Statler Hotel, New York City
June 2-July 1	Pediatric Conference, U. of Calif., San Francisco
June 6-10	American Medical Association, Atlantic City, New Jersey
June 6-11	Vaginal Approach to Pelvic Surgery, Cook Co. Grad. Sch. Med., Chicago
June 6-11	Thoracic Surgery, Cook Co. Grad. Sch. of Med., Chicago
June 6-July 1	Surg. Anatomy and Clin. Surg., Cook Co. Grad. Sch. Med., Chicago
June 6-24	Surgical Technic, Cook Co. Grad. Sch. of Med., Chicago
June 9 (12-4 p.m.)	Third An. Industrial Health Conf., Omaha Mid-West Clin. Soc.
June 13-17	Fundamental Adv. in Internal Med., U. of Colo. Med Center, Denver
June 13-18	Hematology, Cook County Graduate School of Medicine, Chicago
June 13-24	Office and Operative Gynecology, Cook Co. Grad. Sch. Med., Chicago
June 13-17	Symposium on Basic Sciences Related to Anesthesiology, U. of Pittsburgh
June 13-18	Esophageal Surgery, Cook Co. Grad. Sch. of Med., Chicago
June 13-18	Surgery of the Colon and Rectum, Cook Co. Grad. Sch. Med., Chicago
June 17-18	Upper Peninsula Med. Soc., Gateway Hotel, Land O Lakes, Wisc.
June 19-22	Idaho State Medical Association, Sun Valley.
June 20-July 1	Surg. Anatomy & Clin. Surg., Cook Co. Grad. Sch. Med., Chicago.
June 20-July 1	Fractures & traumatic surgery, Cook Co. Grad. Sch. Med., Chicago
June 20-July 1	Neuromuscular diseases, Cook Co. Grad. Sch. Med., Chicago

COUNTY SOCIETIES

MEETINGS

Black Hawk

At the May 17 meeting of the Black Hawk County Medical Society, Dr. Robert Parker, consulting internist in cardiology at the Mayo Clinic, and associate professor at the University of Minnesota, spoke on "Cardiology in General Practice."

Johnson

At the meeting of the Johnson County Medical Society held on May 4, Dr. Sidney E. Ziffren, of the Department of Surgery at SUI, spoke on "Planning for Atomic Casualties."

Montgomery

On May 26, the Montgomery County Medical Society held its Invitational Golf Tournament and Spring Medical Meeting at the Country Club in Red Oak. The scientific session consisted of lectures by Drs. Giles A. Koelsche and Henry Dodge, of the Mayo Clinic, on "Status Asthmaticus" and "Various Methods for the Control of Pain," respectively. Special entertainment, consisting of golf and bridge, was provided by the Society's Auxiliary for the wives of the physicians.

Page

At the regular April meeting of the Page County Medical Society, Dr. Charles McLaughlin, Jr., professor of surgery at the University of Nebraska College of Medicine, discussed "Acute Surgical Abdomen." He had many interesting color slides to exhibit as case examples.

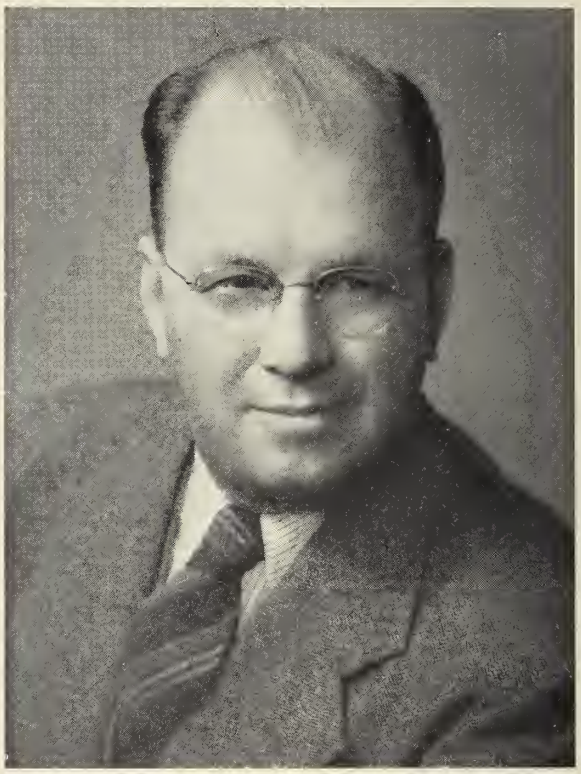
Polk

Mr. Edwin M. Kingery was honored at the April 20 meeting of the Polk County Medical Society on the twenty-fifth anniversary of his becoming executive-secretary of the organization. He is the only full-time county medical society executive-secretary in the state.

The Society presented him a watch, together with a framed tribute.

Mr. Kingery has held other responsible positions during the past 25 years. He was the first executive-director of Blue Shield, the medical and surgical service plan sponsored by the State Society, and was one of the first members of the National Blue Shield Commission.

TWENTY-FIFTH YEAR AS EXECUTIVE



Mr. Edwin M. Kingery

DEATHS

Dr. Arthur Ray Lynn, 71, of Marshalltown, died at a hospital there on April 27, following a 17-week illness. He began practice in Sabula in 1905, had completed 50 years of work this year, and, only three days before his death, had been elected to Life Membership in the Iowa State Medical Society.

Dr. Christian Smith Kirkegaard, 65, died on April 16 following a heart attack. He practiced in Ringsted from 1927 until 1943, and at Estherville since then. During that time, it is said that illness never kept him from his work a single day.

Dr. Raymond Alvah Seiler, 71, died at Cedar Rapids on April 20. He had practiced medicine at Blairstown since 1911.

Dr. Roderick B. Chisholm, 88, who practiced at Griswold from 1907 until his retirement in 1948, died at his home there on April 5.

PRO-BANTHĪNE® IN DUODENAL ULCER



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthīne.

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

". . . our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. . . .

"Prompt relief of ulcer pain by ganglionic blocking agents . . . coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine Bromide (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain, or in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

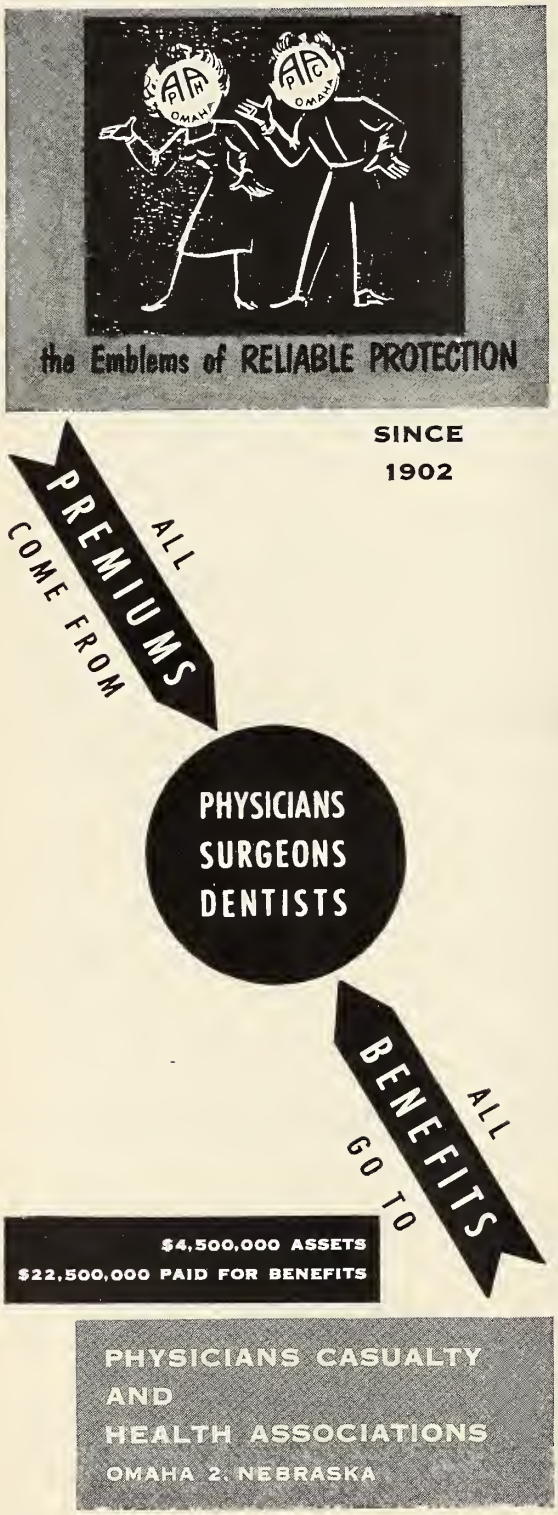
---

1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

SEARLE

WE CORDIALLY INVITE YOUR INQUIRY for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your dependents.



The Month in Washington

Washington, D. C.—For the first time in many years, there is a strong possibility that Congress will enact legislation providing federal grants to medical schools. Unlike most bills of the past, which would have given the schools money for salaries and other operating costs, the bill getting most attention now would give money only for construction and equipment.

Action first came in the Health Subcommittee of the Senate Labor and Welfare Committee. Senator Lister Hill (D., Ala.), chairman of the subcommittee as well as the committee, is the principal sponsor of the bill. Senator Hill, long interested in health legislation, was a co-sponsor of the hospital construction act that has been in operation for eight years.

Under the education bill the federal government would grant a total of $250 million to medical schools at the rate of $50 million a year for five years. No school could receive more than $3 million. New schools would receive 50 per cent of construction and equpiment costs (up to $3 million limit), but existing schools would receive only one-third, unless they agreed to increase freshman enrollment by at least 5 per cent. If they wished, schools could set aside 20 per cent of the federal grant into a permanent endowment fund, with earnings to be used for maintaining the building and equipment.

Nearly a score of medical school deans appeared before the Hill subcommittee to urge approval of the bill. Also supporting it were the American Medical Association and the American Dental Association, the latter on condition that dental schools also be included. There were no opposition witnesses before the Hill subcommittee.

The AMA's witnesses were Drs. F. J. L. Blasingame, a Trustee, and Walter S. Wiggins, associate secretary of the Council on Medical Education and Hospitals. Dr. Blasingame reviewed efforts of the Association since its founding to improve medical education. He cited evidence to show that medical training in this country now is the best in the world, and that the supply of physicians is increasing at a faster pace than the population.

Dr. Wiggins urged the subcommittee to make two changes. He asked that the financial inducement offered for increased enrollment be dropped, as it might cause some schools to take in more students than they could train properly, a fear that was reflected also in the testimony of some of the medical school deans. He also said the AMA recommended that the law require that six members of the Council on Medical Education be "leading medical authorities."

In the House, the Interstate and Foreign Com-

merce Committee, facing a heavy schedule of hearings on other bills, was slow to take up the medical education bill. But there, too, its prospects are good, particularly as the bill is sponsored by Chairman Percy Priest (D., Tenn.), whose role in medical bills compares with that of Hill in the Senate.

It appears now that Congress also is willing to go along with the Defense Department once again and extend the doctor draft act for another two years. It is scheduled to expire next June 30. The AMA opposes an extension, maintaining that a more attractive military medical career and better use of uniformed physicians would take care of the services' need for experienced specialists and administrators. The department's main argument for an extension was the need for these older men. Before reporting out the bill, however, the House Armed Services Committee made one significant change. It rewrote the bill to exempt any physicians 35 years or older who had applied for a commission at any time in the past and had been turned down solely because of physical condition.

Also moving ahead on the legislative course is a bill to continue the $100 per month equalization pay for physicians and dentists in uniform. At hearings before the House Interstate and Foreign Commerce Committee the AMA supported the special pay extension, but objected to one provision. The bill originally would have withheld the $100 from men with an obligation under the regular draft unless they agreed to serve for more than the two-year draft obligation. The House Committee eliminated this section. As the bill went to the House, it provided that all commissioned medical and dental officers receive the special pay.

Still undecided was the fate of a Defense Department's bill for medical and dental scholarships. Scholarships would cover subsistence as well as all school expenses. A student receiving aid for a year or less would have to serve on active duty for an extra year; if the scholarship were for more than a year, he would have to spend three extra years on active duty.

At this writing Congress continues to show no particular interest in reinsurance of medical insurance plans, a bill that the administration considers important. Nor have hearings been scheduled yet on the No. 2 administration bill, that providing federal guarantee for mortgages on such health facilities as hospitals and clinics.

BOOKLET ON PREMATURE BABIES

A booklet prepared by the Children's Bureau of the federal H.E.W. Department entitled YOUR PREMATURE BABY is being distributed to provide

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates—1955

SURGERY—Surgical Technic, Two Weeks, July 25, August 8
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, August 8
Surgical Anatomy & Clinical Surgery, Two Weeks, June 20, August 22
Surgery of Colon & Rectum, One Week, September 19
General Surgery, Two Weeks, October 3
Gallbladder Surgery, Ten Hours, June 27, October 24
Thoracic Surgery, One Week, October 3
Esophageal Surgery, One Week, October 10
Fractures & Traumatic Surgery, Two Weeks, June 20, October 17

GYNECOLOGY—Vaginal Approach to Pelvic Surgery, One Week, June 6
Three-Week Combined Course Gynecology and Obstetrics September 12

MEDICINE—Two-Week Course, September 26
Electrocardiography & Heart Disease, Two Weeks, July 11
Gastroscopy, One Week Advanced Course, September 12
Gastroenterology, Two Weeks, October 24
Dermatology, Two Weeks, October 17

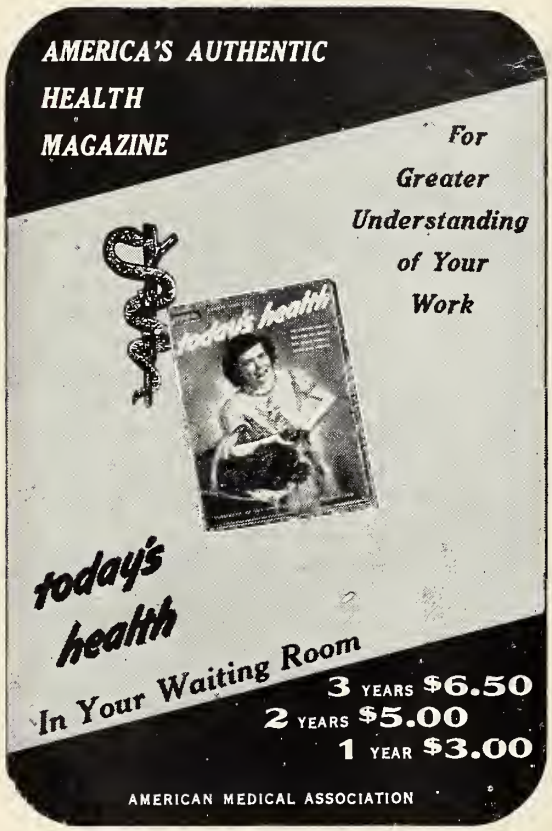
RADIOLOGY—Clinical Diagnostic Course, Two Weeks, by appointment
Clinical Uses of Radioisotopes, Two Weeks, October 10

PEDIATRICS—Neuromuscular Diseases, Two Weeks, June 20
Pediatric Cardiology, One Week, October 10 and 17

UROLOGY—Two-Week Course, October 10

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.



information to parents of such infants. In question and answer form, it traces the development of the children from their birth to the time they leave the hospital. It supplements the pamphlet INFANT CARE, of which 33,000,000 copies have been published since 1914.

The Bureau reports that more than five per cent of U.S. births are premature.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa

Thursday at 11:15 a.m.

"HEART OF AMERICA"

June 2 ..... Research
June 9 ..... What's a Heart Murmur?
June 16 ..... Rheumatic Heart
June 23 ..... Congenital Heart Disease
June 30 ..... The Heart and Athletics

WSUI—Iowa City, Iowa

Tuesday at 11:45 a.m.

"THE STORY BEHIND THE DISCOVERY"

June 7 ..... The Sheep at Melun
June 14 ..... The Invisible Enemy
June 21 ..... The Cat and the Mouse
June 28 ..... Almost Human

TELEVISION

WOI-TV—Ames, Iowa

Thursday at 8:30 p.m.

June 2 ..... Alcoholism
June 9 ..... Pharmacy
June 16 ..... Cancer Detection
June 23 ..... Nursing
June 30 ..... Radiology

KGLO-TV—Mason City, Iowa

Sunday at 5:30 p.m.

June 5 ..... Sunshine and Skin
June 19 ..... Rehabilitation

KCRG-TV—Cedar Rapids, Iowa

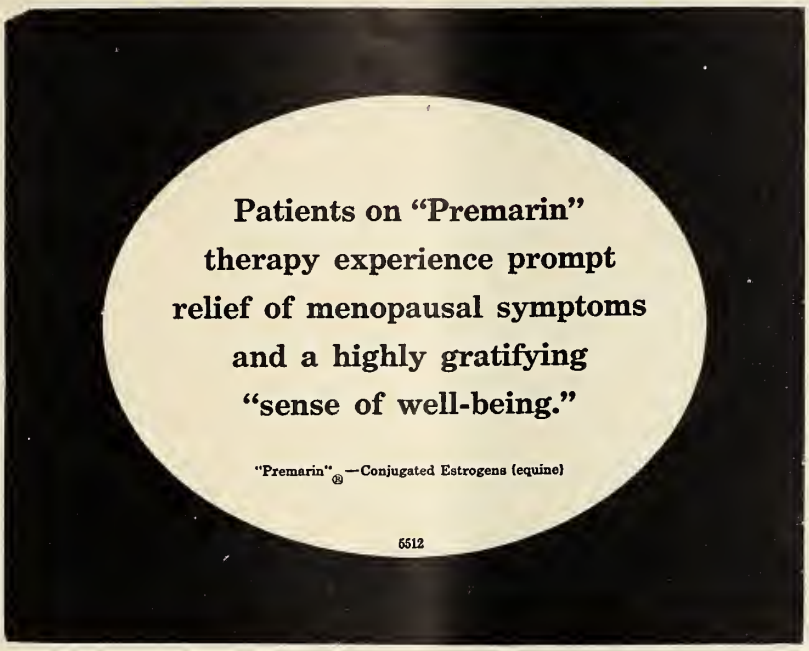
Tuesday at 6:30 p.m.

June 7 ..... Stuttering
June 14 ..... Pregnancy
June 21 How to Take Care of Your Baby at Home
June 28 ..... Birth Injuries

KTIV-TV—Sioux City, Iowa

Sunday at 3:30 p.m.

June 5 .... What to Do in Case of Emergency
June 12 ..... Plastic Surgery
June 19 ..... Stuttering
June 26 ..... Pregnancy



SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 Capacity 200 beds

Under the Supervision of the Sisters of Mercy

An Institution for the Study and Treatment
of Nervous and Mental Disorders.

Conditioned Reflex and Antabuse Therapy
for Alcoholism

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director
JAMES D. MAHONEY, M.D., Associate Director RICHARD B. LEANDER, M.D.

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

PERSONALS

Dr. Ransom D. Bernard, of Ames, is recovering satisfactorily following G-U surgery performed at University Hospitals, Iowa City. Dr. Bernard practiced medicine for many years in Clarion, and subsequently was general manager of the Iowa State Medical Society.

At the Texas Medical Association's annual meeting in Fort Worth late in April, **Dr. C. M. Kos,** of SUI, spoke and exhibited a colored motion picture on surgery for the correction of otosclerosis called transtympanic mobilization of the stapes. The new technic is said to be an improvement upon a procedure that was developed years ago and later abandoned as useless.

On April 19, the Cedar County Medical Society honored **Dr. P. M. Hoffman,** of Tipton, on the fiftieth anniversary of his entry into medical practice. There were 17 guests at the dinner.

Dr. Robert Bremner, a recent graduate of the College of Medicine at SUI who is interning at Broadlawns Polk County Hospital, Des Moines, has announced his intention of practicing in Steamboat Rock, beginning in July. He will take over the practice of **Dr. P. F. Tempel,** who entered military service a few months ago.

Construction of a sizeable addition to the building housing the offices of **Drs. J. L. Powers** and **D. E. Wolters** was recently completed at Estherville. They now have seven, instead of five, examining rooms, and the structure has been better adapted to their purposes in numerous other ways.

The bishop of the Sioux City Diocese of the Roman Catholic Church has presented **Dr. J. B. Thielen,** of Fonda, with an award for outstanding leadership in youth activities.

On completion of two years' service as flight surgeon in the Air Force, **Dr. Hanley F. Jenkins** returned to his practice at Ogden late in April. Dr. Jenkins has been stationed at the Sioux City Air Base.

Dr. Richard V. Owen, a 1950 graduate of the College of Medicine at the University of Illinois, opened an office for the practice of medicine in Washington, Iowa, on April 25. He has had post-

graduate training in Pasadena, he served as flight surgeon with the Air Force during the Korean War, and has worked in a California clinic during the past two years.

Dr. R. R. Rembolt, director of the Hospital-School for Severely Handicapped Children at SUI, was named president of the new Central States Hospital-School Association at the group's organizational meeting in Sioux Falls, South Dakota, on April 5. The meeting was attended by representatives of institutions in Illinois, North and South Dakota, and Iowa.

Dr. W. S. Chester, of Albia, suffered a severe stroke at his offices on April 5.

Dr. F. X. Tamisiea has been appointed surgeon for the North Western Railroad at Missouri Valley, replacing **Dr. C. A. Heise,** who closed his practice there recently.

On August 1, **Dr. Donald D. Schmitt,** a 1954 graduate of the College of Medicine at SUI now interning at Iowa Lutheran Hospital, Des Moines, will begin practice in Kimballton.

Dr. James B. Robb, of Chariton, a Life Member of the Iowa State Medical Society, closed his office on March 31, after 49 years of service to the people of Lucas County. When he has sold his home, he intends moving to the vicinity of Washington, D. C., where two of his daughters live.

A daughter was born on April 13 to **Dr. John K. Uchiayama** and his wife, **Dr. Mary Louise Lyons.**

Dr. L. N. Spohnheimer, who was stationed at Mountain Home, Idaho, during his tour of military service, resumed practice at Donnellson with **Dr. Jesse L. Sarr,** on May 1. Dr. Sarr is currently—for the months of May and June—on vacation.

The American Association of Railway Surgeons chose **Dr. H. A. Spillman,** of Ottumwa, as its president-elect at a meeting held in Chicago in mid-April.

Dr. Harry B. Weinberg, of Davenport, became president of the Iowa Heart Association at that organization's annual meeting in Des Moines on April 14. **Dr. J. W. Culbertson,** head of the Cardiovascular Laboratory at SUI, was chosen as president-elect, and **Dr. Herman J. Smith,** of Des Moines, as vice-president.

The Iowa Trudeau Society has chosen as its

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

Ideal practice requires periodic adaptation of the *individualized* formula to the growing infant





Karo Syrup . . . a carbohydrate of choice in "milk modification" for 3 generations

With Karo, milk and water in the universal prescription, the doctor can readily quantitate the best formula for each infant. Individual infant feeding assures early adaptation of the most satisfactory milk mixture. A successful infant formula thus *lays the foundation* for early introduction of semi-solid foods.

Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized. It is a balanced fluid mixture of maltose, dextrins and dextrose readily soluble in fluid whole or evaporated milk. *Precludes* fermentation and irritation. Produces no intestinal reactions. Is hypoallergenic. Bacteria-free Karo is safe for feeding prematures, newborns, and infants—well and sick.

Light and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.

Behind each bottle three generations of world literature.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

president **Dr. W. M. Kirkendall**, an internist at the Iowa City Veterans Administration Hospital and at the SUI College of Medicine.

Dr. I. J. Hanssmann, secretary of the Pottawattamie County Medical Society, was quoted in the COUNCIL BLUFFS NONPAREILL for April 13 as having revealed that his group has found a suitable site for the hospital that it is thinking of building and has given some study to plans that have been proposed by architects.

Drs. W. O. Griffith and **E. B. Floersch**, of Council Bluffs were members of the arrangements committee for the seventh annual spring assembly of Creighton University Medical School alumni that was held at Mercy Hospital, Omaha, April 14-16. A number of other Iowa physicians were among the 125 who attended the sessions.

Dr. John G. Grant, director of the student health service at Iowa State College, Ames, led a round-table discussion at the annual meeting of the American College Health Association, held in Colorado Springs April 28-30.

At Mercy Hospital, Council Bluffs, **Dr. W. A. DeYoung**, of Glenwood, began receiving intensive treatment for a liver ailment in mid-April.

Dr. Herman Hausheer will join **Dr. D. E. Mitchell** in practice at Mt. Ayr on July 1. Dr. Hausheer is a graduate of the College of Medicine at SUI and is interning at Broadlawns Polk County Hospital, Des Moines.

A former state skeet champion, **Dr. C. E. Decker**, of Davenport, won the Scott County Sportsmen's Club championship on April 17 by cracking 95 out of 100 birds. **Dr. R. A. Towle**, also of Davenport, was the added-bird handicap winner in the all-gauge contest, hitting 211 out of 250 for the best aggregate. Dr. Decker's score was second best in the latter competition.

Dr. E. J. Gottsch, of Shenandoah, underwent surgery at the Mayo Clinic on April 19.

The Henry County Medical Society has contributed $1,500 to the fund that is to be used for equipping the addition to the Memorial Hospital

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

50 and eight years

Treating Alcohol and Drug Addiction



RALPH CLINIC

Formerly The Ralph Sanitarium

A Department of the Benjamin Burroughs Ralph Foundation for Medical Research

Ralph Emerson Duncan, M.D., Medical Director.

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone VIctor 3624

THE RETREAT HOSPITAL

Des Moines, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
MARTIN J. KRAKAUER, Psychologist

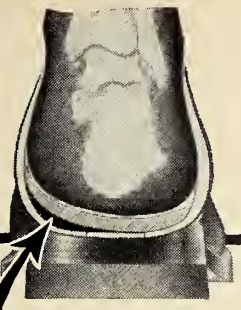
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist

SYDNEY L. MACMULLEN, Administrator

HERBERT W. VETTER, Asst. Administrator

2801 Woodland Ave. **Phone 5-2121**

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge ot inner corner of heel where support is most needed.
- Speciol Supreme rubber heels ore longer thon most anotomic heels ond mointain the appeorance of normol shoes.
- The potented arch support construction is guaronteed not to breok down.
- Innersoles ore guoronteed not to crock, curl, or collapse. Insuloted by o speciol loyer of Texon which also cushions firmly and uniformly.
- Foot-so-Port losts were designed ond the shoe construction engineered with orthopedic odvice.
- Over nine million poirs of men's,women's ond children's Foot-so-Port Shoes hove been sold.
- By a special process, using plostic positive costs of feet, we moke more custom shoes for polio, club feet and oll types of abnormal feet thon ony other monufocturer.

Write for details or contact your local **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directary*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

PICKER X-RAY CORP. of Iowa

DAVENPORT DES MOINES
SIOUX CITY WATERLOO
OMAHA

SALES—SERVICE—SUPPLIES
X-RAY AND ELECTROMEDICAL EQUIPMENT

An Iowa Corporation To Serve the Profession of Iowa

J. K. DUNN, *Vice President*

To check the constipation habit . . .

restore

HABIT TIME

of bowel movement

Bottles of 1 pint

Wyeth®
Philadelphia 2, Pa.

PETROGALAR®

Aqueous Suspension of Mineral Oil, Plain (N.N.R., 1949)

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
1202 Locust Street Telephone 2-6766

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

at Mt. Pleasant. The federal government will pay into the fund half as much as has been secured from local sources.

Dr. W. R. Bliss, of Ames, has been elected president of the Iowa Academy of Surgeons, succeeding **Dr. Vernon Peterson,** of Clinton. Other officers are **Dr. Robert B. Stickler,** of Des Moines, secretary-treasurer, and **Dr. Robert T. Tidrick,** of SUI, vice-president. The newly elected members of the Academy include **Drs. Sidney Ziffren, J. L. Ehrenhaft, W. L. Yetter** and **Samuel Walker,** of Iowa City, **Drs. C. N. Cooper, C. P. Addison** and **C. J. Mikelson,** Waterloo, **Dr. P. J. Monnig,** Sioux City, **Dr. R. W. Conklin,** Newton, and **Dr. T. T. Mazur,** Burlington.

Dr. Lester D. Powell, a Des Moines surgeon, was operated upon at the Mayo Clinic on May 4.

Dr. Howard Smead, of Des Moines, medical director for the Des Moines and San Diego plants of the Solar Aircraft Company, was made a fellow of the Industrial Medicine Association at Buffalo, New York, on April 28. The program for which Dr. Smead is responsible has received recognition from the American College of Surgeons and the Occupational Health Institute.

Dr. G. R. Andre, of Lisbon, had a heart attack while attending a hospital staff meeting in Cedar Rapids. He was hospitalized for a time, and he expects to curtail his activities for a considerable period.

The Iowa Radiological Society elected **Dr. S. F. Singer,** of Ottumwa, as its new president at a meeting held in Des Moines during the annual Meeting of the Iowa State Medical Society. He succeeds **Dr. Arthur Echternacht,** of Fort Dodge. Dr. Singer is also president of the Iowa Division of the American Cancer Society and a member of the board of directors of the national cancer organization.

Dr. Vernon B. Blaha, a Marshalltown surgeon, closed his office on April 30, preparatory to entering upon a two-year term of active duty as a lieutenant commander in the Navy's medical corps. He reported to the Great Lakes Naval Hospital for assignment. He plans to resume practice in Marshalltown.

Dr. A. N. Schanche, of Ames, has dissolved his association with **Drs. J. G. Fellows** and **A. E. Rosebrook** to begin individual practice in the offices that were occupied by the late **Dr. W. B. Armstrong.** Dr. Schanche is an internist.

Dr. Lawrence J. Halpin, of Cedar Rapids, became president of the American College of Allergists at the group's annual meeting in Chicago on April 29.

Dr. H. W. Clasen, a Life Member of the Iowa State Medical Society, closed his office in Cedar Falls recently. He plans henceforth to make his home with his daughter in Denver, Colorado.

Between nine and ten o'clock on the morning of April 20, three Marshalltown physicians, **Drs. Otis Wolfe, Harold Sauer** and **D. D. Harris** seized a man whom they had seen rifling cars parked outside Evangelical Hospital, where they are staff members, and held him until police arrived. He was found to have a quantity of narcotics in his possession.

Dr. T. G. Walker, of Riceville, entered St. Mary's Hospital, Rochester, Minnesota, during the third week in April for examination of an injury to his back which he incurred some time ago and which had not responded satisfactorily to previous treatment. His father, **Dr. T. S. Walker,** a Life Member of the Iowa State Medical Society, undertook to look after his patients during his hospitalization.

Pfizer Laboratories and the firm's local representatives sponsored a golf tournament for Polk County physicians at the Wakonda Club, Des Moines, on May 18.

Dr. Rutledge C. Schropp, a Des Moines surgeon, has returned to practice following a four-year residency at the Veterans Administration Hospital there.

Dr. Stewart O. Olson, of Des Moines, reported on May 18 to Great Lakes Naval Station, to begin military service.

Dr. Robert M. Johnson, of Des Moines, is presently attending the aviation medical school at San Antonio, Texas, prior to beginning a residency in surgery at the Des Moines V-A Hospital on July 1.

In the golf tournament held on the opening day of the State Society's Annual Meeting, **Dr. Herbert Shulman,** of Waterloo, was medalist, with a score of 84, and **Dr. Don Newland,** of Des Moines, was runner-up, with 85. Weather such as cannot adequately be described in these columns kept many would-be entrants indoors, but there were 15 who participated.

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

in arthritis
and
allied disorders...



nonhormonal anti-arthritic

BUTAZOLIDIN®

(brond of phenylbutazone)

relieves pain • improves function • resolves inflammation

Employing the serum protein-polysaccharide ratio (PR) as an objective criterion of rheumatoid activity, it has again been shown that BUTAZOLIDIN "...produces more than a simple analgesic effect in rheumatoid arthritis."[1]

Clinically, the potency of BUTAZOLIDIN is reflected in the finding that 57.6 per cent of patients with rheumatoid arthritis respond to the extent of "remission" or "major improvement."[2]

Long-term study has now shown that the failure rate with BUTAZOLIDIN in rheumatoid arthritis, and particularly in rheumatoid spondylitis, is significantly lower than with hormonal therapy.[3]

(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., ond Ishmael, W. K.: J. Lob. & Clin. Med. 45:331, 1955. (2) Bunim, J. J.; Williams, R. R., ond Black, R. L.: J. Chron. Dis. 1:168, 1955. (3) Holbrook, W. P.: M. Clin. North Americo 39:405, 1955.

BUTAZALIDIN® (brond of phenylbutazone). Red coated tablets of 100 mg.

BUTAZALIDIN *being o patent therapeutic ogent, physicions unfamilior with its use ore urged to send for literoture before instituting therapy.*

GEIGY PHARMACEUTICALS Divisian of Geigy Chemical Corporotion
220 Church Street, New York 13, N. Y.
In Canoda: Geigy Pharmaceuticals, Montreal

51155

Geigy

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of May 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland), Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.) .....Lt., U.S.N.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Bickford, R. H., Iowa City
(Lawton, Oklahoma) .....A.U.S.
Blaha, Vernon B., Marshalltown
(Great Lakes, Illinois) Lt. Comm., ...U.S.N.R.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.) .....Lt., U.S.N.R.
Broman, J. A., Maquoketa
(Ft. Sill, Okla.) .....Capt., A.U.S.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
(Marine Corps Recruit Depot, San Diego,
Calif.) .....Lt.(j.g.), U.S.N.R.
Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Eckberg, R. A., Hubbard
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Brooke Army Med. Ctr., Ft. Sam Houston,
Texas) .....Capt., A.U.S.
Farrior, Richard T., Iowa City
(Tampa, Florida) .....
Field, C. A., Cresco
(Manhattan, Kans.) .....Capt., A.U.S.
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) .....Capt. U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.
Hanske, Edward A., Des Moines
(Camp Gordon, Georgia) .....Capt. U.S.A.H.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.

THIS DR

is the symbol
of the
Standardized
Tablets
Quinidine Sulfate
Natural
0.2 Gram
(approx. 3 grains)
produced by
Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.
Boston 18, Mass.

Q4

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.,
4003 11th Street Place,
Telephone 3-3804

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City .....A.U.S.
Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) .....1st Lt., A.U.S.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.) .....
Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.
Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Maxwell, J. R., Iowa City
(Tacoma, Washington) .....Capt., A.U.S.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Nielsen, G. E., Des Moines
(APO Seattle, Washington) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Peterson, L. G., Holstein
(Camp Kilmer. N. J.) .....A.U.S.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Reading, Donald, Iowa City
(U.S. Army Examining Station, Des Moines) .....
Rodgers, G. H., Mt. Ayr
(Brooke Army Hosp., Ft. Sam Houston, Texas)
.....Lt. A.U.S.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Bethesda, Maryland) .....Lt., U.S.N.R.
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Denver, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.
Stivers, T. W., Des Moines
(Hutchinson, Kansas) .....Lt. (jg) U.S.N.R.
Sugioka, Kenneth, Iowa City
(Long Island. N. Y.) ..... A.U.S.
Swanson, Eric M., Iowa City
(Omaha, Nebraska) .....

Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(11th Field Hosp., APO 178, New York City)
.....Capt., A.U.S.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wall, J. M., Boone
(Bryan A.F.B., Texas) ..... 1st Lt., U.S.A.F.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st Lt., U.S.A.F.
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven
(New London, Connecticut) .....U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.

LEDERLE SYMPOSIUM AT MADISON

Under the joint sponsorship of the Wisconsin Academy of General Practice and Lederle Laboratories, a one-day symposium on Office Procedures and Clinical Medicine will be held on Friday, June 24, at the Madison East Side Businessmen's Club, Madison. Nationally known speakers will present lectures on office proctology, management of extremity fractures, poliomyelitis, office management of allergy and infertility.

COMBINATION OF WORK AND VACATION

At the convention of the Upper Peninsula Medical Society, at the Gateway Hotel in Land O'-Lakes, Wisconsin on June 17 and 18, two clinicians on orthopedics and hypertension from the Mayo Clinic, two professors from the College of Medicine of the University of Michigan, two professors from the Marquette University Medical School, one doctor from Wayne University, and several other authorities will present a top-notch scientific program.

Facilities for golf, tennis, fishing, swimming, archery, skeet and other sports will be available, and special entertainment is being planned for physicians' wives. For reservations and programs, doctors are invited to write Dr. P. R. Lieberthal, 104 South Suffolk Street, Ironwood, Michigan.

STATE SOCIETY GETS TESTIMONIAL

Mr. W. K. Niemann, of Des Moines, headed a delegation representing the National Foundation for Infantile Paralysis that presented a Certificate of Appreciation to the Iowa State Medical Society, during its Annual Meeting.

It praises the Society for "devotion to the needs of the stricken during the difficult years when Polio swept the Nation."

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.



Particularly now...

Why is **KENT** the one fundamentally different filter cigarette?

The more brands of filter cigarettes that are introduced—the more innovations in filtering—the clearer becomes the difference in KENT. Consider for a moment why.

Only KENT, of all filter brands, goes to the extra expense to bring smokers the famous Micronite Filter. All others rely solely on cotton, paper or some form of cellulose.

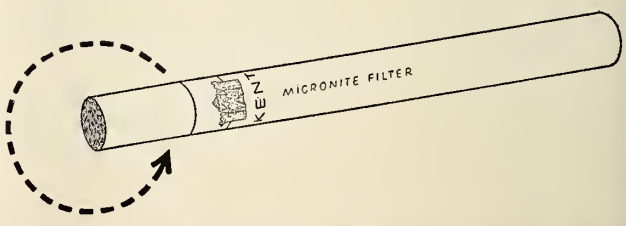
Indeed, the material in KENT's Micronite Filter is the choice in *many* places where filter requirements are most exacting.

With such filtering efficiency, it is understandable why KENT with the Micronite Filter takes out even microscopic particles —why KENT is *proved* effective in impartial scientific test after test.

Taste will tell the rest of the story. For KENT's flavor is not only light a mild. It stays fresh-tasting, cigarette af cigarette.

May we suggest you evaluate KENT yourself, doctor? We firmly believe th with the first carton, you will reach same conclusion. As always, there is difference in KENT. And now more th ever before.

KENT
with exclusive
MICRONITE
FILTER



"KENT" AND "MICRONITE" ARE REGISTERED TRADEMARKS OF P. LORILLARD CO

the epileptic



MEDICAMENTA VERA

Parke, Davis + Company

DETROIT, MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV JULY, 1955 No. 7

CONTENTS

President's Address
Gerald V. Caughlan, M.D., Council Bluffs . . . 317
President Elect's Address
Lonnie A. Coffin, M.D., Farmington 319
The Diagnostic Approach in a Hemorrhagic State
Armand J. Quick, M.D., Milwaukee, Wisconsin . 321
Present Day Management of Colles' Fracture
Lee T. Ford, Jr., M.D., and J. Albert Key, M.D., St. Louis, Missouri 324
The Problem of Ano-Rectal Tumors
Harold F. Trafton, M.D., Council Bluffs . . . 328
What Do We Expect of Adolescents?
Hunter H. Comly, M.D., Iowa City 333
Some Aspects of Macular Degeneration
Frank W. Newell, M.D., Chicago, Illinois . . . 337

EDITORIALS

Increase in Dues 341
A Picture of Industrial Medicine in Iowa 341
Rehabilitation Advances 342
Untoward Drug Reactions 342
Work Simplification for Better Living 343
Our Thanks to 1955 Technical Exhibitors 344

SPECIAL DEPARTMENTS

Coming Meetings 340
President's Page 345
The Doctor's Business 346
Blue Cross-Blue Shield 347
The Journal Book Shelf 348
Mental Illness 349
Iowa Academy of General Practice 350
State Department of Health 352
Woman's Auxiliary News 354
Speakers' Bureau Schedules 356
County Societies
Meetings 357
Deaths 357
County Medical Society Officers 358
Minutes of the 1955 Sessions of the House of Delegates 359
Officers and Committees, Iowa State Medical Society . 391
Membership Roster of the Iowa State Medical Society . 393
Fifty Year Club Members 403
Membership Roster of the Woman's Auxiliary . . . 404
The Month in Washington xviii
Personals xx
Roster of Iowa Physicians in Military Service . . . xxxi

MISCELLANEOUS

AMA Surveys County Medical Societies 327
AMEF Gives Awards of Merit 332
Death Risks in Medical Partnerships 336
Danger in Candy-flavored Medicines 339
Letter to the Editor 343
Industrial Medicine Course 349
Wyeth Offers Streptococci Film 349
Better Education in Medical Ethics 351
Why Patients Don't Pay 351
No Failures Among SUI Graduates xix
New Jersey Praises Tennessee xxxvii

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
EDWARD W. HAMILTON, Ph.D., Asst. Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

FRED STERNAGEL, M.D.....West Des Moines
GEORGE H. SCANLON, M.D.....Iowa City
ERNEST M. KERSTEN, M.D.....Fort Dodge
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

President's Address*

GERALD V. CAUGHLAN, M.D.

COUNCIL BLUFFS

For the past two years, your president has striven to learn all of the problems confronting Iowa medicine, and for the past year he has endeavored to guide the Iowa State Medical Society through a most trying period. Now that the end of his term approaches, it is obvious that not one of the pressing problems has been solved. However, progress has been made that should result in a better situation for the profession in Iowa, and a pattern has been set for other state organizations to follow.

As a guide to this address, I have chosen the principles of medical ethics of the American Medical Association. That very fine document should be a prized possession of every practicing physician and should be read often. The first pasage to which I wish to refer is the following: "The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration." Let those words be impressed upon all who are members of the medical profession and upon all those with whom physicians come in contact. Let all consider the advances made in medical care and in the prevention and cure of disease. Elimination of many incurable diseases has taken place, and many diseases which once had a high mortality have practically disappeared. In the past decade, venereal disease, with its concomitant disability, shame, heartache, misery and disgrace, and with its painful and occasionally fatal consequences, has practically vanished from the American scene.

Mastoiditis, which very often has necessitated disagreeable surgery and frequently has been a cause of death, has practically been eliminated, and many types of serious diseases have been made relatively inocuous. The progress in surgery has been similarly outstanding.

The enthusiasm which they themselves are showing over the curtailment of their practices speaks well for the unselfishness of physicians, and conforms well with the ethical principles that I just quoted.

But notwithstanding all of the good that the medical profession has brought and is bringing to the American people, there is apparently a move on the part of many individuals and organizations to change the medical picture in this country. This movement is going on in national and local governments, and in many organizations and institutions. As one nationally famous comedian puts it: "Everyone wants to get into the act."

At the same time, there seems to be a move on to decry the accomplishments of American medicine and its organization. Probably this is the reason why medical spokesmen and medical organizations are rather hesitant to speak forthrightly and to make positive decisions. There is no reason for timidity or hesitancy, however, in speaking out in favor of what is best for American medicine, and for the medical care of the American people. Let us proclaim from the rostra, from editorial rooms, and even from the housetops that Americans enjoy the best medical care in the world because of American medicine's freedom from governmental restrictions and interference, and that this fine care will continue as long as American medicine remains free!

HIGHWAY SAFETY

There is one challenge, however, that has not been met by our profession, and it seems that now it can be ignored no longer. I refer to the tremendous slaughter and crippling that is brought upon us by automobile traffic. Thirty-five thousand deaths and nearly two million injuries cannot be ignored, and the cost of two billion dollars a year in property destruction is by no means a negligible item. We have seen local, state and national organizations wrestle with the problem unsuccessfully.

Now, it is apparent that our profession must assume that the problem is a medical one. We must go to the manufacturers of automobiles and to the lawmaking bodies and say to them that this carnage must be halted, and that it can be halted only by doing three things. First, all automobiles must be equipped with governors to control the speed at which they may be driven. Second, all applicant for drivers' licenses must be carefully examined as to their capacity to handle these lethal machines that throng our streets and highways. Lastly, the penalties for infractions of safety laws must be made most severe.

PHYSICIAN-HOSPITAL CONTROVERSY

Now, again, I want to quote from the principles of ethics of the American Medical Association: "A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and

* Delivered at the Annual Meeting of the Iowa State Medical Society on April 25, 1955.

is harmful alike to the profession of medicine and the welfare of the people."

That paragraph applies to the present hospital-physician controversy. The storm that had been born in the previous year, and which seemed likely to diminish and disappear, shortly assumed tornadic proportions during my term as president. No settlement with the Iowa Hospital Association could be effected, and the result is a lawsuit to determine the legality of certain medical work in the hospitals. During all of the negotiations with the Iowa Hospital Association, it was apparent that no settlement could be reached, despite the fact that every assurance was given that, under the change of practice proposed by our Society, there would be no decrease in the revenue of the hospitals and no increase in the hospital costs to patients. What the outcome of the lawsuit will be is uncertain. Certainly any verdict will result in an appeal to the Iowa Supreme Court. Following that, there may be a movement to bring about a change in the law as it is now written. We will continue to conform to the ethical principles just quoted, and under no circumstances will any contract between pathologist and radiologist and the hospitals be approved that does not conform to ethical principles.

This last year has brought about a possible solution of the osteopathic question with the inspection of osteopathic schools, including the one at Des Moines, by a committee of the American Medical Association. Certainly, until this year there was no evidence that such an inspection would be permitted, and the fact that such a revolutionary move has been made portends that in the not too distant future, the schools will become medical schools and that the cult of osteopathy will disappear.

In the Legislature a movement was instituted to enlarge the scope of chiropractic treatments, but the proposal did not become law. Certainly every physician should be alert and should do all he can to prevent any inroad by that cult.

The campaign to stop the care of non-service-connected disabilities in Veterans Hospitals has made little progress. A committee of the American Medical Association has undertaken the task of educating the medical men on the necessity for combating this abuse, for there is no question about its being socialized medicine.

In Iowa, the Iowa State Medical Society and the University Hospitals are working together to bring about full coverage of the state by medical men. One phase of this project is the adoption of the preceptor plan. This involves a physician's taking a medical student into his office for a month during the vacation period preceding the student's senior year, for the purpose of showing the young man or woman the opportunities existing in general practice. Also, in May, a physician-senior class seminar will be held, at which the advantages of practice in Iowa will be the topic of discussion.

CIVIL DEFENSE

The chairman of the Civil Defense Committee has submitted the following material for insertion in this address: "Today the practicing physician must assume an added duty. Unpleasant as it is to contemplate, we may at any time be plunged into a struggle for existence in which the civilian population will be attacked with weapons capable of spreading destruction, injury and disease in a scale never before possible. In such a conflict a nation can survive only if its population is protected. The task which all physicians must now assume is to prepare for that day which we hope will never come. We must train ourselves and aid in the training of ancillary personnel in matters pertaining to casualty care and the public health measures attending chemical, biological and radiological warfare directed at the civilian population and in those public health measures incident to the problems arising from the mass evacuation of cities. This is a stupendous undertaking which will require concerted effort. Its very size dictates that all must participate and, further, that this participation must be voluntary, for no full-time, paid organization can be adequate. This is a new public service which the profession has accepted as part of its tradition."

At this time, I wish to pay tribute to the work of the officers and the committees of the Society for their unselfish service to Iowa medicine. The Council has been very active, and its work can be made more effective by attention to the small local societies by councilors.

The headquarters staff has done a marvelous job in carrying out the directions of the officers and committees. The trustees, faced with many problems, are getting the situation well in hand and should effect many important movements in the future.

PUBLIC RELATIONS

It has been the opinion of many physicians that an educational program to stress the value of medical services should be carried on. The Public Relations Committee, under the able direction of Dr. Glesne, has been most restrained in this matter, for it has felt that good public relations can be achieved, not by advertisement and publicity, but by the attitude of physicians themselves. During the past year, your president has frequently called this matter to the attention of the physicians and has attempted to present in detail what they must do to gain and hold the favor of the public.

Again I quote from the PRINCIPLES OF ETHICS: "Physicians do not remain content to limit their activities to the care of the infirm, since they recognize also their useful rank among the vast concourse of citizens on whose shoulders the destiny of our nation rests. In their relationships

with patients, with colleagues and with the public, they maintain under God, as they have down the ages, the most inflexible standards of personal honor."

Much can be done to preserve the free practice of medicine if those precepts are carried out.

In the final analysis, the future of our profession lies in the public's attitude toward the profession and its individual members.

In conclusion, it is my belief that there has been progress during the past year—that in spite of the disappointments, the failure to settle any matters and the lawsuit that is pending, we have a more compact, better informed and more closely knit membership. And I am of the opinion that the year 1954-1955 may well serve as a sound bridge connecting the honored traditions and accomplishments of the past with what is hoped will be the most glorious period of medicine in the years to come.

President Elect's Address*

LONNIE A. COFFIN, M.D.

FARMINGTON

As the time approaches for my assuming the presidency of the Iowa State Medical Society, I am very humble. I realize the magnitude of the duties and responsibilities that attach to that office, and I feel that I shall have some difficulty in fulfilling them. But I assure you that I will work at the job to the limit of my ability.

I am happy to have had the privilege of serving this Society as a Trustee for four years. That experience has given me a much better insight into the workings of the organization than I might otherwise have had, and it will help me greatly in performing my duties as President.

I should be negligent if I were not to express my appreciation for the privilege of serving as President-Elect during the past year. Dr. Caughlan has been most helpful to all of us, but especially to me, in that he has pointed the way toward the solution of problems that I shall inherit from him. Also, I am grateful for having had an opportunity to meet with the various committees of the Society, particularly the Committee on Legislation. Although mine will not be a Legislature year, the Congress will continue to deliberate upon proposals with which we are very much concerned, and plans will have to be made for the legislative activity of future years. Dr. Coleman and the members of his Committee have done an outstanding job, and their advice has been very highly valued and appreciated. Last but not least, I should like to thank the office force for the help it has given me in preparing myself for the presidency.

The problems that will face us during the coming year are numerous, and some of them are very important. There was a time, not too many years ago, when this Society could be run by a very few. But that is not the case today. We have become big business. It takes the best thinking of many, if not all, members to solve the problems that present themselves. And their efforts must be cooperative. There is no longer a place in this Society for a solo performer!

Of the many problems that we have under consideration at the present time and will continue to deal with during the coming year, I should like to discuss a few and to outline my views on two or three.

Physician-Hospital Controversy

The first and most important of all of them is, of course, the physician-hospital controversy. At the beginning, I felt, as a few others did, that it could be settled satisfactorily if the pathologists and radiologists were permitted to bill for the professional services and the hospitals were permitted to bill for the technicians' work and for the use of the physical plant and apparatus. Because of later developments, I am convinced I was wrong.

I am sure that all of you are aware and are appreciative of the vast amount of work that was done by the special committee headed by Dr. Abbott. I know that those men did everything in their power to reach a settlement. The courts have now undertaken to reach a decision in the controversy, and we shall have to await their ruling.

We were given too little assistance in our attempt to rescue specialists from the status of hospital employees, and we made some mistakes as regards the Hill-Burton Act. It is my impression that in each of those instances the AMA was of less service to us than it should have been. When Dr. Martin had asked the hospitals' committee and the State Society committee to meet in Chica-

* Delivered at the Annual Meeting of the Iowa State Medical Society on April 25, 1955.

go with representatives of the AMA and the AHA and when that meeting had been held, we expected, quite reasonably I think, that something would come of it. We were scarcely surprised that no mutually acceptable formula was arrived at before the adjournment of that meeting, but we had reason to believe that the AMA would send us a report outlining the stand it proposed to take in the matter or making suggestions about the most likely means of settling the difficulty. But we got nothing of the sort—indeed, nothing at all.

Then again, because the AMA neglected to provide us the information on Hill-Burton that the AHA provided its member hospitals, we originally took a position that proved impossible to defend. Why we didn't get that information, I don't know.

Our Society and the other state societies make up the AMA. We are governed by its rules and regulations. Why is it, then, that it failed to counsel us in these matters?

Another subject of grave importance to the Iowa State Medical Society is the care of veterans with non-service-connected disabilities. I firmly believe that all veterans whose disabilities are not the result of their military service should pay their own bills. Why any citizen of this great country of ours should feel that our government owes him care because he was called to defend it in time of stress is more than I can see. Such service should be regarded as a privilege! However, the veteran with a service-connected disability should receive the best of medical care at all times at government expense.

You are all aware of what has been done on the osteopathic problem in past years and of what is being done today. Our committee has done a great deal of excellent work, and, as you know, an inspection team from the AMA has been visiting the osteopathic schools over the United States. It is my impression that it will make a report to the AMA Board of Trustees and House of Delegates at the Atlantic City meeting. What findings it will report remain to be seen.

PUBLIC RELATIONS

At this time, I should like to say something about our public relations. In my opinion, we have reached a new low. We received far too much publicity in the newspapers and magazines concerning our elaboration of medical ethics and still are receiving too much. We were attempting to streamline and simplify billing procedures, but our motives were misinterpreted. The physician-hospital controversy, likewise, has been handled by the press in such a way as to make it seem that we were wholly self-seeking, when, in reality, we were defending an important segment of the American system of private enterprise against the inroads of collectivism. As a result of that misinterpretation, the confidence that a great many people have had in us has been shaken.

I admit that we cannot practice medicine as we did 40 years ago, or 20 years ago, or even 10 years ago, but I maintain that the essential function of the doctor has remained unchanged. Our primary aim in life is to care for the sick to the very best of our knowledge and ability. If we continue to do that, our public relations will never get too bad. Of course, we shall have to continue fighting for the economic and social system that we believe in and that we are convinced is best for America. If a few wounds are inflicted upon us, we are just the people who should know how to heal them with a minimum of residual damage. We have heard all too frequently that our house needs cleaning—or, perhaps, that there are parasites within the body of organized medicine. If that is true, and I'm not going to deny it, we, again, are the people to administer the purge, for politicians would be sure to botch the job.

But, I repeat, we must constantly keep in mind that our job is to give to the sick the best medical care possible. If we do that, we shall have very little to worry about as regards our public relations.

COMMITTEE APPOINTMENTS

You will recall that a year ago the House of Delegates adopted a resolution from Davis County, according to which each county was asked to send the president the names of doctors willing and able to serve on committees. Two names were to be sent for every delegate to whom the county was entitled. It was thought that such nominations would be a means of securing a better distribution of committee appointments. Though a few counties neglected to send lists, most of them did as they had been asked, and I have attempted to use men from every county that submitted names. You will realize, of course, that a new system of this sort could scarcely be expected to work perfectly the first year.

In closing, I should like to say that regardless of what my personal feelings may be in any particular matter, I shall at all times do what seems best for the Society. I shall ask and expect every member to promote medicine in Iowa and give the very best medical care of which he is capable. In my opinion, the Iowa State Medical Society is more completely united now than it ever has been. I hope and believe that it will remain so.

Again let me urge you to remember that we are doctors of medicine and that our primary purpose in life is to care for the sick. If we do that, I am sure we shall promote good will toward our profession and will need to worry very little about socialized medicine.

Scientific Articles

The Diagnostic Approach in a Hemorrhagic State

ARMAND J. QUICK, M.D.

MILWAUKEE, WISCONSIN

It is highly probable that in many instances of abnormal postoperative bleeding, a basic hemostatic defect is responsible, and if that defect had been recognized and corrected before the operation, the patient could have been spared multiple transfusions, and a surprisingly large amount of blood could have been saved. The importance of recognizing a bleeding tendency and the need for its exact and precise diagnosis are obvious, but, unfortunately, the need is often ignored because the approach to this problem is not clearly understood.

CAREFUL HISTORY-TAKING IS ESSENTIAL

Diagnosis of hemorrhagic conditions, like diagnosis of all other diseases, begins with the history, not with the laboratory. An indifferent inquiry such as, "Do you bleed easily?" is insufficient. Easy bruising should always receive consideration, but it must be remembered that black and blue spots are common in children and in many women. A history of bleeding following minor operations such as circumcision, tonsillectomy and tooth extraction often constitutes strong evidence of a bleeding tendency, but even that evidence must be evaluated judiciously. Bleeding which occurs five or six days after a tonsillectomy is rarely due to a systemic blood dyscrasia. Epistaxis is often a cardinal sign in such conditions as telangiectasia and von Willebrand's disease, but it is absent in a great majority of hemophiliacs. Excessive menstruation may sometimes be almost the only manifestation of a bleeding condition such as thrombocytopenia. Normal menses are no assurance, however, that hemostasis is normal, since many women on therapeutic doses of Dicumarol, for instance, have no abnormal bleeding.

Physical examination sometimes can supply valuable diagnostic information. Impaired movement of a joint may constitute tell-tale evidence in instances when attempts are made to deny hemophilia. Particularly significant are the small hematomas in which extravasation of blood causes discoloration of the skin. Sometimes it is necessary to distinguish the petechiae and ecchymoses of thrombocytopenic purpura from the more macular type of eruption seen in the Schoenlein-Henoch type of purpura. Often, the diagnosis of an unexplained hematemesis or hemoptysis becomes clear with the discovery of a few spider nevi in the mucous membrane of the mouth, pharynx or nose. Telangiectasia, it should be remembered, is not an uncommon disease.

TEST RESULTS VARY IN DIAGNOSTIC VALUE

While the history and the physical examination are important, it is the laboratory which must supply the definitive diagnosis. It is a pity that the common routine hospital tests are insufficient in some instances to permit one's making the exact diagnosis, but it should be emphasized that they could supply much more helpful information if they were carried out with somewhat the precision that is mandatory in the operating room. A few comments on the common tests may be pertinent.

Clotting time. Only when blood is collected carefully by first intention, when a clean, dry syringe and needle are used and when the clotting is carried out under strictly standardized conditions, does the test have any meaning. All capillary methods, without exception, are well-nigh worthless.

Dr. Quick is professor of biochemistry at the Marquette University School of Medicine.

Often, there is fear that if the clotting time is not done as a routine preoperative test, there may be legal complications. Probably it is worse to do a capillary clotting time than to omit the test altogether, especially since a normal finding may give a false sense of security. Even a carefully done normal clotting time on venous blood does not constitute assurance that coagulation is normal. In mild hemophilia, the clotting time may be within normal limits; in thrombocytopenic purpura, it may even be somewhat shorter; and in hypoprothrombinemia, it often is only slightly prolonged. It is not to be gainsaid that the clotting time is a useful and important test, provided that its limitations are recognized, but a prolonged clotting time always demands careful scrutiny and warrants a thorough search for the cause.

Bleeding time. Duke's test, with a spring stylet having the blade set for 2 mm., is simple and satisfactory. The lobe of the ear is the preferred site because of the uniform thinness of its skin. Although the bleeding time is only rarely prolonged, it is nevertheless important. In thrombocytopenic purpura, it is often the best indication of the severity of the condition, and in von Willebrand's disease, it may be the only positive diagnostic finding. It should be emphasized that the bleeding time is entirely independent of the clotting time and that it is essentially a measure of the response of the capillaries to injury.

Clot retraction. Although the property of clotted blood to retract and express serum may perhaps have significance in hemostasis, the phenomenon has very little diagnostic value. Primarily, it furnishes an indirect and rough means of determining whether the platelets are decreased.

Platelet count. By means of the direct counting method and the regular counting chamber, one can determine the number of platelets with the same degree of accuracy as he can determine the number of erythrocytes. There is no longer any justification for guessing at the number of platelets from a stained blood smear.

Tourniquet test. The meaning and the clinical significance of a positive tourniquet test remain unknown. In severe thrombocytopenic purpura, the test is usually strongly positive. It is not directly related to the bleeding time, for the latter may be greatly prolonged while the tourniquet test is negative. Vice versa, a positive tourniquet and a normal bleeding time are often observed. Occasionally one finds a marked positive tourniquet test as the sole abnormal finding. Sometimes this is accompanied by a history of bleeding, but in other instances, hemostasis appears to be normal. Such observations illustrate the difficulty of evaluating the test.

Prothrombin time. This test is now a routine procedure in nearly every clinical laboratory. Recently, Biggs[1] has stated that it is "undoubtedly the most useful single test of clotting function ever devised." One might add that the principle on which this procedure is based has become a pillar upon which much of the modern methodology for the diagnosis of hemorrhagic disease is directly or indirectly based. It is unfortunate that critics of the test have dissipated so much of their energy in attempting to discredit it, when they could have achieved much more by mastering the relatively simple technic devised with meticulous care by its author.

To understand the one-stage prothrombin-time test, one has to revert to the classical theory which is expressed by the simple equation:

Thromboplastin + Ca + prothrombin = thrombin

Though it is now recognized that the actual mechanism whereby thrombin is formed is far more complex, the fundamental idea that thromboplastin and prothrombin are the basically required factors still holds. In the test, an excess of thromboplastin is added. Therefore, any defect in the thromboplastin of the blood is corrected, a fact which accounts for the normal prothrombin time in hemophilia and thrombocytopenic purpura. A prolonged prothrombin time immediately indicates a decrease of prothrombin activity. This activity depends not only on prothrombin itself but also on accessory agents, two of which are now established, namely, the labile factor (also known as factor V, ac-globulin and proaccelerin) and the stable factor (factor VII, S.P.C.A. or

TABLE 1

A SIMPLE GUIDE TO THE DIAGNOSIS OF HEMORRHAGIC STATES

	Afibrinogenemia	*Hypoprothrombinemic States*	*Hypothromboplastinemic States. Deficiency in*		*von Willebrand's Disease*	*Heparinemia*
			Platelets	*Plasma factors*		
Bleeding time	Normal	Normal	Prolonged	Normal	Prolonged	Normal
Clotting time	Infinity	Prolonged	Normal	Prolonged	Normal	Prolonged
Prothrombin time	Normal*	Prolonged	Normal	Normal	Normal	Prolonged
Prothrombin consumption time	Normal	Prolonged	Decreased	Decreased	Normal	Decreased
Platelet count	Normal	Normal	Normal	Normal	Normal	Normal

* If fibrogen is added.

proconvertin). Because in normal blood both labile and stable factors are in excess, the constant prothrombin time observed is due to the fixed level of prothrombin.

Hypoprothrombinemia, as determined by the one-stage test, is caused most commonly by an actual decrease of prothrombin itself, and the degree of the hypoprothrombinemia thus measured correlates remarkably well with the severity of the bleeding tendency. This has been illustrated by three families having congenital deficiency of prothrombin.[2] In one, the affected members who have a prothrombin time of 16 seconds are clinically normal and do not bleed. In the second family, the prothrombin time varies from 19 to 26 seconds in two brothers, both of whom have a mild but distinct bleeding condition. In the third family, a little girl who has a prothrombin time of 35 seconds has required 15 transfusions during the past year.

A deficiency of either the labile or the stable factor will cause a prolonged prothrombin time and a resulting hemorrhagic condition. By means of rather simple procedures, the three types of hypoprothrombinemia can be differentiated. The details can be found in a recent publication.[2] Clinically, it is important that one differentiate between the conditions that respond to vitamin K and those that do not. In general, the administration of vitamin K corrects the prothrombin time only in those conditions in which production of prothrombin is low due to vitamin K deficiency or has been depressed by an anti-vitamin-K agent such as Dicumarol. All types of hypoprothrombinemia are at least temporarily corrected by an adequate transfusion of fresh plasma.

HYPOTHROMBOPLASTINEMIAS

Prothrombin consumption test. The test which I devised and reported in 1947[3] is actually an extension of the theory underlying the one-stage prothrombin method. It is assumed that when blood clots, the amount of prothrombin consumed depends upon the quantity of thromboplastin made available during the period of coagulation. The prothrombin remaining in the serum, therefore, becomes a quantitative measure of the thromboplastin produced during the process of clotting. At the time the test was developed, it was shown that the thromboplastin formed in the blood resulted from two factors, one from the platelets, and the other from the plasma. It was established that the latter, named thromboplastinogen, is deficient in hemophilia. A poor prothrombin consumption occurs in thrombocytopenia and in hemophilia. As a result of recent studies in various laboratories, it is now clear that other plasma factors in addition to thromboplastinogen are required for the generation of thromboplastin. Therefore, in addition to true hemophilia, there exist at least one or perhaps more types of hemophilia-*like* diseases. In all of these, the prothrombin consumption is defective. The test obviously is not specific for any one, but constitutes the means for detecting their existence. The differentiation of the hypothromboplastinemias, as this group of diseases can collectively be called, is probably beyond the facilities of most hospital laboratories. As a matter of fact, the diagnosis of very mild hemophilia often presents difficulties which can be met only by the clinician of long experience who possesses almost consummate skill and judgment in laboratory procedures.

Since the treatment of hemophilia and the treatment of hemophilia-like diseases are nearly identical, the differentiation of these entities is not an absolute clinical necessity. Attention must be directed, however, to the possibility that the hemophilic condition has been produced by the presence of a factor which is often called "circulating anticoagulant," but which is actually an antithromboplastinogen. Blood may contain such a excess of this inhibitor that it inactivates not only its own thromboplastinogen but also that supplied by a transfusion of normal blood.[4] In this distressing situation, the coagulation abnormality is not corrected by transfusion, and, in fact, cannot be combatted by any known means. The simplest way to detect the anticoagulant is to mix the patient's blood with normal in the ratios of 1:10, 1:5 and 1:1, and do a prothrombin consumption time on the mixtures. If antithromboplastinogen is present, little or no consumption of prothrombin occurs.

The prothrombin consumption time is the key to hemophilia and the other diseases in which insufficient thromboplastin is generated. Without this test and the other procedures which have been developed on the fundamental concepts underlying the test, little progress could have been made in hemophilia. Like the one-stage prothrombin time, it deserves to be made available in hospital laboratories.

SUMMARY

By means of a careful history and physical examination, a bleeding condition can generally be established, at least tentatively. Verification requires the use of a few simple laboratory tests, but they must be carried out with precision and accuracy. As shown in Table 1, the common hemorrhagic states can be fairly well differentiated from each other.

BIBLIOGRAPHY

1. Biggs, R.: Assessment of clotting efficiency. Brit. Med. Bull., **11**:5-10, (#1) 1955.
2. Quick, A. J., Pisciotta, A. V., and Hussey, C. V.: Congenital hypoprothrombinemic states. A.M.A. Arch. Int. Med., **95**:2-14, (Jan.) 1955.
3. Quick, A. J.: Studies on the enigma of the hemostatis dysfunction of hemophilia. Am. J. Med. Sci., **214**:272-280, (Sept.) 1947.
4. Quick, A. J., Daniels, E. R., and Hussey, C. V.: Acquired antithromboplastinogenemia (hemophilia-like disease): with special reference to its diagnosis. J. Lab. & Clin. Med., **44**:94-103, (July) 1954.

Present Day Management of
Colles' Fracture

LEE T. FORD, JR., M.D., AND J. ALBERT KEY, M.D.
ST. LOUIS, MISSOURI

A SEVERE COLLES' FRACTURE in an adult is a serious injury, for though it is easy to diagnose and not too difficult to reduce, the reduction is more difficult than any other to maintain, and it is almost impossible to restore the patient's wrist to complete normalcy, as regards function and anatomy.

Key and Conwell[1] have aptly termed a Colles' fracture an extension and compression fracture of the lower end of the radius. In such a fracture, one which is sustained most often after a fall on the outstretched hand, not only may the distal radius be angulated dorsalward, but there may be radial shortening, the cancellous bone may be impacted, and there may be dorsal displacement in supination of the distal fragment as well as a fracture of the styloid process of the ulna. The radial fracture is frequently comminuted, may extend into the carpal joint and may involve the radial-ulnar joint. Swelling due to hemorrhage usually occurs rapidly.

Bacorn and Kurtzke,[2] in an analysis of 2,000 cases of Colles' fracture from the New York State Workmen's Compensation Board, attest to the fact that a perfectly normal wrist seems never to be obtained on repair of this type of injury. In their series, an average of 24 per cent of residual disability was present. Ninety-five per cent of their cases showed some loss of finger motions. From a statistical standpoint, the duration of the immobilization in these cases did not appear to influence the functional end-result. It is of interest to note that, in their opinion, physical therapy was of no help to that group of patients.

Gartland and Werley,[3] in 1951, made an analysis of 60 cases of Colles' fracture with an average of 1½ years of follow-up. Their cases had been treated by closed reduction, followed by the application of a sugar-tong type of plaster splint. They were immobilized in the Cotton-Loder position of volar flexion with ulnar deviation for a two-week period, and then were changed, the wrist being placed in the neutral position. The average period of immobilization was six weeks. They found that although volar tilt in the radius was frequently restored by the initial manipulation, it had been lost by the time the plaster cast was removed. And frequently they found that the radial tilt which also, in many instances, had been restored by the manipulation, was also lost. In their analysis of final results, they reported that 60 per cent of the follow-up x-ray films looked like the ones that had been taken when the patients were first seen and before the fractures were reduced, as far as the deformity of the distal radius was concerned. Nevertheless, 68 per cent of their patients were considered to have satisfactory functional end-results.

At a meeting of a small orthopedic group last year in St. Louis, members from different states were polled as to their methods of treating Colles' fractures. The technics were found to be markedly varied, and there were almost as many methods as there were physicians reporting. The very fact that methods and outlines of treatment of Colles' fracture differ so much among surgeons suggests that no one method is completely satisfactory. The essence of the treatment of a Colles' fracture is the surgeon. The efficiency of his treatment is based upon his ability to reduce the fracture, and to maintain his reduction in a cast that is just tight enough to serve its purpose, but not so tight as to impair circulation. The earlier the fracture can be reduced and the better the reduction, the more comfortable the patient will be, and the less likely he is to develop complications. When feasible, it should be needless to say, radiographs should be taken of the fracture before treatment is instituted.

A mild Colles' fracture that does not require reduction should be immobilized in a circular plaster cast extending from just below the elbow to the hand, and the plaster should be cut back at the hand so that maximal flexion of the fingers can be obtained. Circulation is checked carefully for several days, and the cast is bivalved if necessary. A sling is used for a week or so, and the patient is encouraged to use and exercise his fingers actively.

METHODS OF REDUCTION

Those fractures which require closed reduction can be reduced under either local or general anesthesia, depending upon the preference of the surgeon. If seen within the first 12 hours, the majority of Colles' fractures in adults can be treated quite satisfactorily on an out-patient basis and under local anesthesia.

One can reduce the fracture by direct manipulation with the fingers, first breaking up the impaction so that the distal fragment is completely

The authors are members of the staff in orthopedic surgery at the Washington University Medical School.

free. The fracture can then be manipulated into a so-called Cotton-Loder position of volar flexion, ulnar deviation and pronation of the wrist. If the fracture is not too severely comminuted, the cast may extend from below the elbow over the wrist and hand. If the fracture is quite badly comminuted and unstable, it may be wise to extend the cast above the elbow to prevent rotation of the forearm into supination.

The full Cotton-Loder position is uncomfortable and awkward, and frequently a Colles' fracture can be maintained just as satisfactorily and with more comfort and less interference with circulation if one fixes the wrist in ulnar deviation with slight to moderate volar flexion, and the forearm in mid pronation-supination.

Following the reduction by manipulation, one can use a sugar-tong plaster consisting of a slab which extends from the dorsum of the hand, about the elbow and over the volar aspect of the forearm, wrist and hand. It can be held in place by means of circular bandages. This latter method does not maintain the reduction so well as does the circular cast, but it facilitates the spreading of the plaster splints so as to lessen the swelling and control the circulation.

A Colles' fracture may also be reduced by direct traction applied to the fingers to break up the impaction. This procedure can then be followed by manipulation, and either manual or mechanical traction to maintain the reduction while a cast or splint is applied. A special method of applying mechanical traction for this purpose was demonstrated to one of us two years ago at a small orthopedic club meeting in South Bend, Indiana. The patient lies supine on a table or stretcher, and either local or general anesthesia can be utilized. The arm is abducted and internally rotated at the shoulder, the elbow is fixed at 90°, counter-traction is obtained by a cloth loop placed over the arm above the elbow, and 15 pounds of traction is applied through Chinese finger traps over the thumb and index finger. After five or ten minutes of this traction, the fracture is molded and a large circular slab of plaster extending about ⅞ of the circumference of the hand, wrist and forearm is applied and is held in place by a bandage. Traction and molding are continued until the plaster is set. Then both are discontinued. On successive days, as swelling increases or recedes, this rather more than semicircular splint or cast may be spread slightly or compressed slightly and fastened with adhesive tape. The plaster is trimmed out very liberally in the palm of the hand so that the patient can flex his fingers completely. We have adopted this method and have used it almost exclusively in our reductions of Colles' fractures. We have been impressed by the improved finger function and by the improved reductions that we have obtained by means of it.

After swelling subsides, during the one or two weeks following fracture, there is a tendency for the fracture to slip, in all of the closed methods of reduction that have been described above. If some slight recurrence of dorsal tilt or of radial tilt occurs, the wrist is not subjected to a second manipulation. If marked displacement should occur, a second manipulation may be considered. In any event, because of the tendency of Colles' fractures to displace in plaster, it is wise to watch for that sort of difficulty. For that purpose, a repeat x-ray should be taken about ten days following the reduction.

We have not had much experience in using the pins or wires that are employed in some of the more radical treatments of Colles' fractures. Because we have seen several poor results from infection following the use of pins in the metacarpals, we are reluctant to recommend them. DePalma's method of inserting a small Steinman pin across the distal radial fragment into the proximal fragment and then into the ulna is said to maintain a reduction well, but it may be followed by some interference with pronation and supination.



Figure 1. This method of finger traction, with either local or general anesthesia, has been satisfactory in reducing most Colles' fractures. A finger trap is applied to the thumb and index finger. (No originality is claimed for this method.) A circular cast or a large plaster splint is then applied as shown.



Figure 2. Volar aspect of the dorsal slab pictured in Figure 1. Note adequate opening on volar aspect to allow full space for finger flexion and room for swelling to occur. Circular strips of adhesive are used to help maintain the splint in place.

Likewise we haven't had experience with the methods of external skeletal fixation for Colles' fractures. Instead, we prefer closed methods of treatment in most cases.

Thornton and Warner,[4] of Atlanta, recently showed a series of very good results in Colles' fractures using a method of open reduction followed by fixation with a Rush intramedullary pin. We have used this technic on one occasion only, in a patient with an accompanying fracture of the hip, and used it so that the patient might make an early start at using crutches.

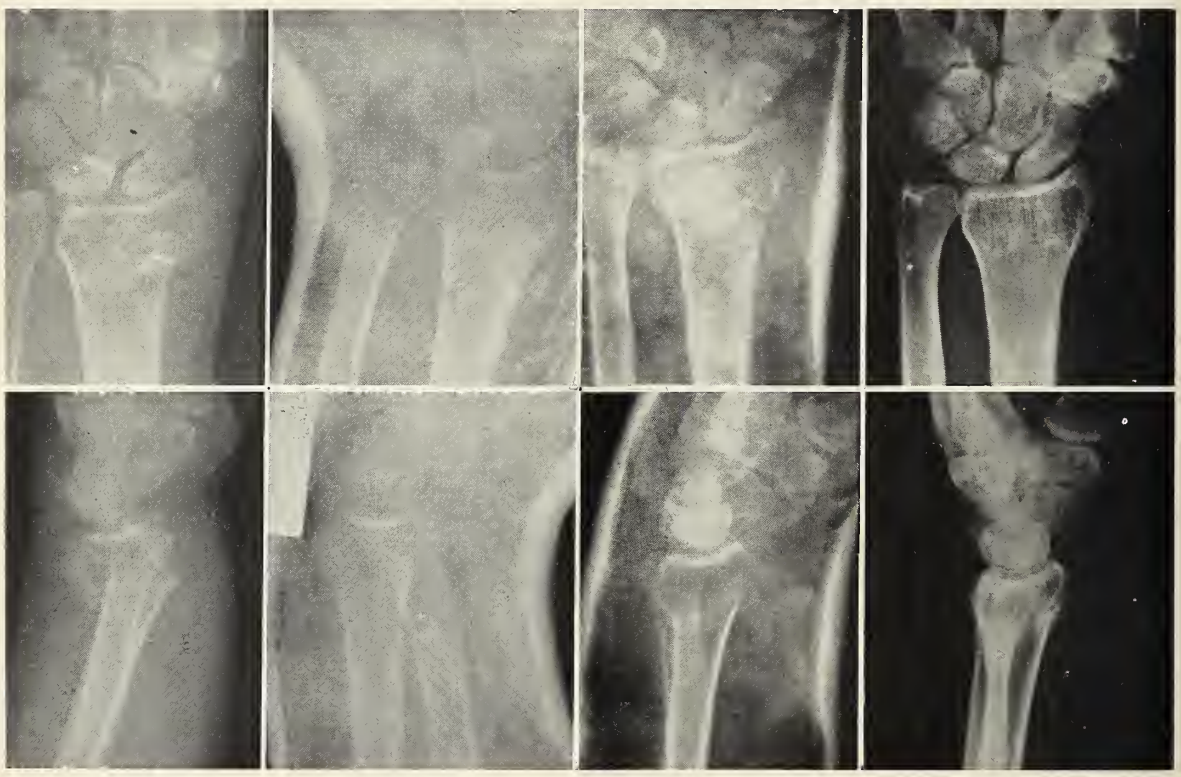
In the post-reduction management of cases with Colles' fractures, it is essential that excessive swelling of the fingers be avoided. The hand should be kept elevated above the elbow, and if there is any doubt about the tightness of the plaster, the cast should be split and spread. It has been found satisfactory in circular casts to remove a one-inch segment from the volar aspect of the cast over the forearm, wrist and hand, and to spread the cast in the same manner that the 7/8-circular splint can be spread. By this means, there is less likelihood of one's losing the reduction. It is likewise essential that the cast over the hand be trimmed as far proximally as possible, only the minimum amount of plaster being left that will maintain the position of the hand in ulnar deviation and volar flexion. As swelling recedes, it is helpful to tighten the cast or splint so as to remove the slack.

Throughout the period of his arm's immobilization, the patient is urged to exercise his fingers actively and as much as possible.

There is no set time at which the cast can be removed. When an X-ray shows adequate bony union of the fracture, the wrist can be freed from the plaster, and that time may come sometime between five and eight weeks after the reduction. Afterwards, the patient is given instructions in active exercises for his fingers and wrist, and he is seen at intervals for several additional months, or until maximum improvement has occurred.

COMPLICATIONS

Sudeck's post-traumatic dystrophy may be a major disabling complication of Colles' fracture. It seems most likely to develop when considerable swelling has occurred and has not been relieved adequately or soon enough. It may appear after the cast has been removed and may be manifested by pain, swelling, shiny skin and marked limitation in the motion of the fingers and wrist. Typical marked bony atrophy is noted on X-ray. For



A. Pre-reduction B. Post-reduction C. Several weeks later D. Over a year later

Figure 3. This typical Colles' fracture was reduced by manipulation and fixed in a circular cast in a modified Cotton-Loder position. Some settling had occurred by the time that the lateral X-ray in "C" was taken. But in spite of the less-than-perfect X-ray, a good functional result was obtained.

treatment, deep X-ray therapy, stellate ganglion blocks and vasodilating drugs are utilized.

Among the late results of Colles' fractures, limitation of finger motion is frequently the most disabling factor. Either as a result of the fracture or as the result of inadequate treatment of it, a patient may have considerable deformity of the wrist, but still may not have too much disability from the standpoint of function, provided that he has full finger motion.

At follow-up examination after maximum recovery following a Colles' fracture, a critical examiner will always find some residual deformity from bony displacement, or a slight limitation of one or several motions of the wrist, even though finger function may be normal.

It is far better to lose position of a reduced Colles' fracture in order to spread a cast as a means of preventing interference with circulation, if by doing so one can maintain full finger function. Patients with marked residual stiffness of the fingers because swelling in the cast was unrelieved would have been better off in the final analysis if they had not consulted a physician at all, but had accepted the position of deformity and had simply maintained finger motion with or without splinting of the fracture.

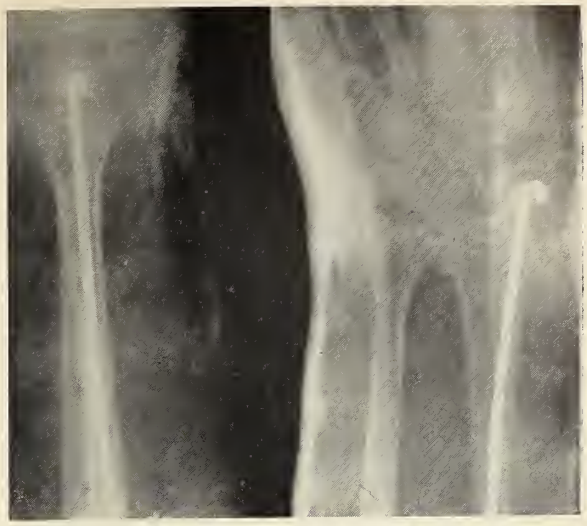


Figure 4. This patient had a Colles' fracture, and in addition an intertrochanteric fracture of the hip. The Colles' fracture was reduced by traction, and a Rush intermedullary pin was inserted, a cast was applied and the hip fracture was nailed. After three weeks, the cast was removed and ambulation on crutches was allowed. The patient made an early and excellent recovery from the Colles' fracture.

CONCLUSIONS

Colles' fractures are serious injuries, and they are difficult ones to treat well. They are not fractures to be treated by a neophyte.

A good end-result is based upon the surgeon's ability to reduce the fracture satisfactorily and to maintain the reduction adequately without interference with the patient's circulation or with the function of his fingers.

REFERENCES

1. Key, Albert, and Conwell, H. Earle: The Management of Fractures, Dislocations, and Sprains. Fourth Edition. St. Louis, C. V. Mosby, 1946.
2. Bacorn, R. W., and Krutzke, J. F.: Colles' fracture: study of 2,000 cases from the New York State Workmen's Compensation Board. J. Bone & Joint Surg., 35A:643-658, (July) 1953.
3. Gartland, J. J., Jr., and Werley, C. W.: Evaluation of healed Colles' fractures. J. Bone & Joint Surg., 33A:895-907, (Oct.) 1951
4. Thornton, L., and Warner, P.: Management of Colles' fracture with the Rush medullary nail. South. M. J., 48: 654ff., (June) 1955.

AMA Surveys County Medical Societies

To find out what county medical societies throughout the country are doing and to help them develop new public service programs, the AMA's Council on Medical Service currently is distributing questionnaires to officers of the 1,911 county and district medical organizations in the United States.

The most complete of its type ever undertaken, this survey covers all major areas of society interest, including meetings, committee work, scientific programs, insurance systems, dues, office facilities and personnel. The information gleaned from these reports will aid the Council in its attempt to serve as a clearing house for organizational ideas and novel service technics.

The Council, together with the Department of Public Relations, which is cooperating in the project, hopes that all questionnaires will be answered fully and carefully, and that they will be returned promptly. Each county society secretary is asked to bear in mind that his own group will profit from having an opportunity to learn, in as great detail as possible, how other similar organizations are meeting nearly identical problems, and to discover ways in which it can profitably expand its activities. The Golden Rule, it has been pointed out, applies in this instance, quite as it does in most others.

The Problem of Ano-Rectal Tumors

HAROLD F. TRAFTON, M.D.

COUNCIL BLUFFS

In contrast to the frequent occurrence of benign pathologic processes in the lower ano-rectal canal, the relatively low incidence of malignant lesions has in many instances led to unwarranted complacency as regards their diagnosis and management.

Our interest in the problem of ano-rectal tumors was stimulated by the finding of a number of malignant lesions in this location. Some of them were masked by associated and much more obvious benign disease, and were discovered only incidentally. Others, initially and erroneously, were diagnosed as benign disease.

Only those ano-rectal tumors arising in the immediate vicinity of the pectinate line and in the area distal to that line, including the perianal skin, are considered within the scope of this discussion.

INCIDENCE

Malignant lesions of this region are infrequent. Bacon[1] found that apparently five per cent of all malignancies distal to and including the sigmoid colon arose in the anal canal, and another five per cent arose in the one inch proximal to the ano-rectal line.

TABLE 1

Cases seen at surgery with apparently benign lesions in the ano-rectal region (fistulas, hemorrhoids, thrombosed hemorrhoids, ano-rectal polyps, etc.)

226

Malignant lesions revealed on biopsy

1	Malignant melanoma of ano-rectal region
1	Epithelioma in fistula (anal)
2	Carcinoid of anorectum
1	Carcinoma *in situ* of anus (squamous)
5	

Obvious gross malignancies in the anal region

1	Malignant melanoma, anus
1	Adenocarcinoma with invasion of anus
2	

In the series of 226 consecutive proctosigmoidoscopic examinations which we carried out during a five-year period on patients coming to surgery for further examination and treatment of apparently benign ano-rectal disease, we encountered five malignant lesions in the lower ano-rectal canal. And we found two additional obvious malignancies in the ano-rectal region during this period. The malignancies are shown in Table 1.

Dr. Trafton is a member of the Department of Surgery at the Creighton University Medical School. He wishes to acknowledge the assistance of the Department of Pathology at Mercy Hospital, Council Bluffs.

ANATOMY OF THE ANO-RECTAL REGION

There are several anatomical features of the ano-rectal canal that are worthy of consideration. The pectinate line is the demarcation between the columnar epithelium above, and the modified skin of the anal canal below. Because the anal canal is very rich in sensory nerve endings, there is greater pain in ulcerative lesions in this area. This ano-rectal or pectinate line not only is the dividing line between the visceral and somatic nervous systems but also is the demarcation line between the portal and caval circulation, and between the visceral and somatic lymphatics. These circumstances account for the lesser frequency of visceral metastases from lesions below the ano-rectal line.

The lymphatics are of special importance. Below the ano-rectal line, the inferior group drains the anal canal and perianal region and empties chiefly into the inguinal lymphatics, but may communicate with the superior group by intramural lymphatics. The superior group, above the ano-rectal line, drains the rectum and empties into the sacral and mesocolic nodes, and thence to the aortic nodes.

PATHOLOGY OF BENIGN TUMORS

The benign tumors are common, and many manifest themselves as submucosal nodules which are palpable and visible on ano-rectal examination. When they are small, they are usually asymptomatic. However, even these lesions that manifest themselves only as small submucosal nodules should be biopsied. According to Jackman's series,[2] over 50 per cent of the submucosal nodules were *chemical granulomas secondary to the injection treatment of hemorrhoids.* The other benign lesions in his series were fibromas, leiomyomata, phleboliths and lymph follicles. The malignancies were carcinoids and lymphosarcomas.

The *squamous papilloma* is commonly found in an anal or perianal location, arising from the squamous epithelium. Occasionally this lesion is of sufficient size to prolapse and cause symptoms such as bleeding and tenesmus, but except for symptomatic effects of that sort, the lesion is of relatively little importance, for it has no apparent malignant potential. Included in this category are the hypertrophic anal papillae, anal condylomata acuminata (warts), and anal fibromata.

The *simple adenoma* is a well-known lesion made up of glandular epithelium. Either the sessile or the polypoid type may arise above the ano-rectal line, and if polypoid, may occur in the anal

canal. Lesions of this type may reveal ulceration, bleeding and tenesmus. Because at least 20 to 25 per cent of them may become cancerous, all are potentially dangerous.

The *villous papilloma or villous adenoma* is an infrequent but important lesion in this area. It is a single, lobular, arborescent, spongy, velvety-red, mucus-secreting tumor that arises from the mucous membrane. It bleeds, secretes mucus and produces tenesmus. It will grow to a considerable size if it is not eradicated, and it has a definite malignant potential.

Apparently the *pigmented nevus* is not often seen in the anal region. Such, at least, has been our experience. However, it is a serious matter in this location. The junction-cell (junctional) type is particularly dangerous and should be dealt with promptly and energetically. Because the nevus cells are found in the basal layers close to the dermal-epidermal junction, it is thought that this type of lesion is the precursor of a malignant melanoma. In the innocent intradermal nevus, the nevus cells are located in the dermis. It is the compound nevus, a combination of the above, that is potentially cancerous (Figure 1).

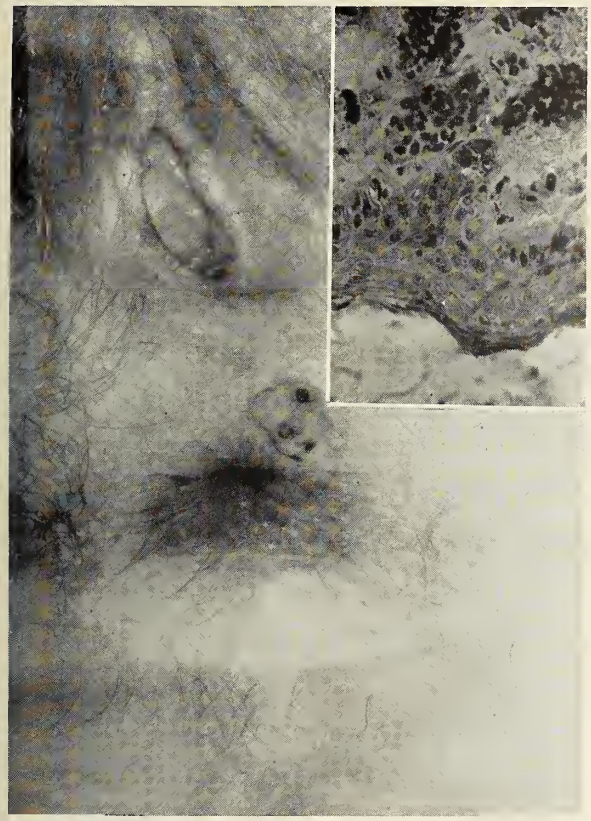


Figure 1. Compound junctional nevus of anus. Case #1.

The *lymphadenoma* is a smooth, asymptomatic, submucosal lesion, palpable as a firm nodule. Microscopically, it resembles a normal lymph node without sinusoids, and it is clinically benign, as indicated by the microscopic picture. However, it may occasionally be confused with lymphosarcoma.

Lymphangioma, angioma and lipoma are infrequently encountered lesions.

MALIGNANT LESIONS

Although malignancy is common in the upper rectum, it is uncommon in the lower ano-rectal region.

The *squamous cell carcinoma,* the commonest malignant anal tumor, constitutes approximately four per cent of the malignancies of the anus, rectum and sigmoid colon. It is found more often in



Figure 2. Anal epithelioma arising in fistula, surgical specimen. Case #2.

women, and among them, it is most frequent in those of the fifth and sixth decades. Although it usually arises in the anal canal, it has been reported as occurring in the rectum because of metaplasia of the columnar epithelium.[3] Not infrequently, such a lesion arises in a hemorrhoid, fistula, leukoplakia or cryptitis.[4] In one of our cases, an anal epithelioma was believed to have arisen in a fistula (Figure 2). It is not usually painful until the upper anal canal is involved, but even then, the symptoms are usually of lesser duration than are those of rectal carcinomas. This lesion is usually ulcerated and bleeding, and, by the time it is diagnosed, it is advanced. It usually has indurated, elevated borders, and it may have nodules around

the periphery. A lesion located high in the anal canal should be of particular concern, for it is usually of a relatively high grade of malignancy. Lymph node involvement is common, but visceral metastasis is not.

Carcinoma in situ. Changes in the anal tissue resembling carcinoma *in situ,* with cellular anaplasia and irregularity without invasion, are more frequent than the actual incidence of anal carcinoma would indicate. Such changes are not infrequently observed during the routine study of hemorrhoidal tissue removed during pregnancy.[5]

Cylindroma is included in this group, but is less malignant than the squamous cell carcinoma, being less susceptible to metastasis.

Basal cell carcinoma is rare and of considerably less malignancy than the squamous carcinoma. With early diagnosis and treatment, the outlook is good.

Carcinoid tumors are interesting ones that arise from the glands of Lieberkühn and are being found with increasing frequency in the rectum and elsewhere in the gastrointestinal tract.[6] Instead of fulgerizing ano-rectal lesions indiscriminately, physicians are performing biopsies upon them far more frequently than they once did, a fact that is doubtless responsible for the increased recognition of carcinoids of this region.

Carcinoids of the rectum are similar in microscopic appearance to those found elsewhere, but the argentaffin (silver staining) properties of the cells are often absent in the rectal carcinoid. Grossly, they are grayish-white to yellow in color, and are firm and rubbery in consistency. They tend to migrate quite early from the mucosa to the lymphatics, but characteristically, they metastasize to the regional nodes slowly. According to Mrazek, Godwin and Mohardt,[7] a small carcinoid (less than 2 cm. in diameter) is not likely to show metastasis. Those authors are of the opinion that the degree of pleomorphism and mitosis correlates well with clinical malignancy. It is believed that all rectal carcinoids, regardless of size, have a malignant potential.

When *adenocarcinoma* arises near the mucocutaneous junction, it not uncommonly shows retrograde submucosal extension to the anus. It may also arise in an epithelized fistula. The adenocarcinoma in the polyp presents a peculiar problem in management, as will be shown later. It is important that the lesion be thoroughly examined pathologically and that it be determined whether the adenocarcinoma, particularly that arising in a polyp, be carcinoma *in situ,* superficial carcinoma with only invasion of the lamina propria, or an invasive carcinoma with actual invasion of the muscularis mucosa or of the vascular or lymphatic channels.

Malignant melanoma, an infrequent but vicious tumor in this location, is thought occasionally to develop from a pre-existing junction-cell nevus.

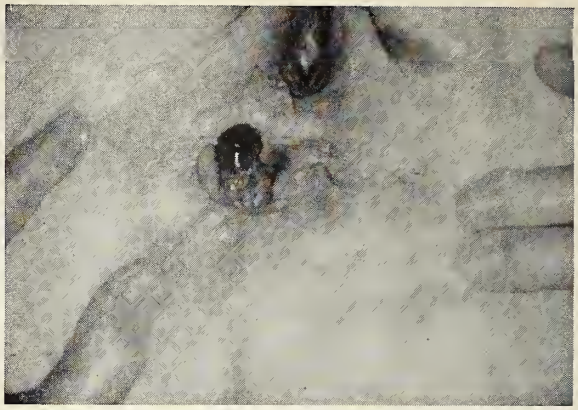


Figure 3. Malignant melanoma of anus. Case #7.

Lesions of this type either begin at the ano-rectal line and invade the submucosa, or arise in the anal skin. They are black, irregular, rapidly growing lesions that ulcerate and metastasize rapidly, via blood vessels and lymphatics. They may be grossly confused with thrombosed hemorrhoids, as in two of our cases (Figure 3). If they are situated in the anal canal itself, as in one of our cases, they may be excruciatingly painful.

Sarcoma. Fibrosarcoma, lymphosarcoma and leiomyosarcoma have been reported in this area, but we have not encountered them.

DIAGNOSIS

It is disconcerting that these easily accessible, malignant ano-rectal lesions are not diagnosed early. The early signs are too often needlessly ignored, both patient and physician thinking them due to the hemorrhoids, fissures and fistulas with which they are often associated. In our series of malignant lesions, although over one-half were associated with such benign ano-rectal pathologies, only one was found actually to have arisen from a pre-existing rectal fistula. The simple digital and anoscopic examination with biopsy is simple, and reveals the diagnosis in approximately 100 per cent of the cases. A few infectious lesions of this region —for example, granuloma inguinale, the verrucous form of anal tuberculosis and condlyomata lata— must be differentiated from malignancies, particularly from the squamous cell carcinoma.

MANAGEMENT AND PROGNOSIS

Benign tumors. The benign tumors other than the villous papilloma and the junction-cell pigmented nevus may be excised locally. It should be added that there should be an adequate biopsy of the adenomatous polyp, particularly of the base of the stalk, and then the base of the lesion should be fulgerized. Though local anesthesia may be satisfactory for the removal of some of these low-lying lesions in the anal canal, we have used the low spinal anesthetic almost exclusively for low ano-rectal lesions. They require fairly wide and deep

excision, and spinal anesthesia will permit the necessarily wide exposure. The villous tumors must be excised more widely, and the base must be cauterized. The pigmented nevus likewise must be especially widely and deeply excised.

Malignant tumors. In the management of *squamous cell carcinoma,* there are proponents for either x-ray therapy and surgery, each by itself, or a combination of the two. It is believed that irradiation should be the method of choice only in the early and not deeply invasive squamous cell carcinomas. Because excessive irradiation in this region is poorly tolerated, it must be expertly applied. Most cases, however, will require radical surgery, consisting of an abdomino-perineal resection with a pelvic dissection of the iliac and obturator nodes, and removal of the inguinal and femoral nodes in continuity with the specimen. In the female, a portion of the vulva and of the perianal skin is widely excised. In the male, the perianal skin and some of the scrotal skin are removed in continuity.

There is some disagreement about whether inguinal and femoral node dissection should be done in all cases. The consensus, however, seems to be that when glands are enlarged, the procedure should in all cases be carried out bilaterally. In the absence of enlarged glands, the majority of surgeons still recommend femoral and inguinal node dissection, though there are those who oppose the prophylactic dissection of inguinal nodes in such cases. Buie and McQuarrie[8] reported in 1950 that 26 per cent of their series, treated by all methods, lived five years. The prognosis has been surprisingly poor in most series of squamous cell carcinomas.

Basal cell carcinoma. If there can be early diagnosis, and afterward, local excision with or without X-ray, these lesions usually do well.

Although all *carcinoid tumors* are potentially malignant, there is evidence that if they are no more than 1 or 2 cm. in diameter and show neither extension nor a high degree of pleomorphism and mitosis, they can safely be treated by local excision and fulguration of the base. In others, a radical abdominal perineal resection is probably the best form of treatment.

Adenomatous polyps with carcinomatous changes always present a problem. In one of them is a non-invasive carcinoma (i.e., a small papillary lesion without invasion of the stalk and underlying tissue), the wide local removal and fulguration and close follow-up are adequate. The superficial carcinoma with invasion of the lamina propria can be treated similarly. However, the invasive carcinoma (invasion of muscularis mucosa) must be treated by radical surgery. And the diffuse lesions, either with or without invasive carcinoma, will probably require radical surgery, too.[9]

Malignant melanoma. It should be stated that at this time there apparently is no satisfactory treatment for malignant melanoma. Indeed, the prognosis is worse in this region than it is elsewhere. Wide and deep removal of the pigmented nevi that occur in this area appears justified as a means of preventing the development of malignant melanomas. Again, the extensive surgery for this lesion has given poor results, but apparently the patient's only hope of cure lies in an extensive abdominal perineal resection with the pelvic dissection of the iliac and obturator nodes, and the removal of the inguinal and femoral nodes in continuity with the specimen.[10] Roentgen therapy has been proved of no value in treating cases of malignant melanoma.

ILLUSTRATIVE CASES

Miss M. W., age 47, was noted on a routine physical examination in November, 1954, to have an asymptomatic 8 mm. soft, fleshy, sessile mass at the perianal margin, as well as a moderately severe vertiglio. The mass was associated with internal and external hemorrhoids. This lesion itself was the normal color of perianal skin, but it contained a small, brown, pigmented "freckle" at its summit. Surgery was recommended, but contact with the patient was lost until she presented herself again approximately three months later. When seen then, the lesion was approximately the same size as before, but instead of the one brown "freckle," there were approximately six dark, pigmented spots on the lesion. A wide and deep local excision of the entire lesion and adjacent skin was carried out. The pathologic diagnosis was compound nevus, with both intradermal and junction-cell characteristics (Figure 1).

Mrs. N. M., age 70, was noted to have a bleeding, painful anal fistula in January, 1954. She had had rectal bleeding and discomfort at intervals during the four years before admission, and almost continuously during the most recent of those years. The anal fistula was hard and indurated, and biopsy revealed a grade-3 squamous carcinoma. The inguinal nodes were negative clinically. An extensive abdomino-perineal resection was carried out. Surgery 14 months later for small bowel obstruction revealed no evidence of recurrence.

Mr. A. B., age 66, underwent surgery in March, 1950, for hemorrhoidectomy and repair of extensive prolapse. There was no gross lesion demonstrable to suggest malignancy, other than some superficial ulceration of the hemorrhoidal tissue. The pathologic report, however, was "pre-invasive carcinoma *in situ.*" There has been no recurrence.

Mr. E. P., age 37, was found in May, 1950, to have moderate internal and external hemorrhoids and an asymptomatic 1 cm. firm, rubbery, slightly yellow mass arising from the mucous membrane just proximal to the ano-rectal line. Wide excision of the tumor and fulguration of the base was carried out, and the pathologic diagnosis was carcinoid. There has been no recurrence.

Mrs. I. W., age 49, was examined in February,

1950, to determine the cause of her rectal bleeding. A firm, pedunculated mass 1½ cm. in diameter was identified just proximal to the ano-rectal line. The lesion was diagnosed microscopically as a grade-1 papillary adenocarcinoma, but further study suggested the diagnosis of carcinoid. A wide excision of the polyp with its entire base was carried out, and was followed by extensive coagulation. There has been no evidence of recurrence.

Mrs. E. H., age 57, presented herself with symptoms of six weeks' duration of a firm, bluish mass on a stalk, and prolapse with the stool. It grossly resembled a thrombosed hemorrhoid, and excision and biopsy were carried out in July, 1951. Diagnosis of malignant melanoma was made, and an extensive abdomino-perineal resection was carried out. There were no evident metastases in the viscera or lymph glands at that time. The patient developed inguinal node metastasis approximately 27 months after surgery, at which time an inguinal node dissection was carried out. The patient lived for approximately a year following the node dissection and died with what autopsy revealed to be diffuse visceral metastasis.

Mrs. A. B., age 78, was seen in May, 1954. She had noted a painful mass at the anal margin three months previously. She was treated by a physician for a lesion that resembled a thrombosed hemorrhoid, and the biopsy revealed a malignant melanoma. When first seen, she had a 2 x 3 cm. hemorrhagic soft mass protruding from the right anal margin (Figure 3). The lesion was arising from the lower anal canal. There were severe prolapsing hemorrhoids associated with this lesion, and there were bilateral nodes present in the groin. A wide local excision of the anal mass was carried out. Because of right upper quadrant pain and regional metastasis, and because there was reason for suspicion that liver metastasis was already present, radical surgery was not carried out. The patient expired three months later with obvious hepatic metastasis and local recurrence of the anal lesion.

SUMMARY AND CONCLUSIONS

1. There is a low but significant incidence of malignant disease in the lower ano-rectal region.

2. The unrecognized association of obvious disease with masked ano-rectal malignancy may delay correct diagnosis and management.

3. The practice of indiscriminate fulguration of ano-rectal lesions without biopsy and a pathologic diagnosis is to be condemned.

4. It is paradoxical that such readily accessible lesions as malignancies of the ano-rectal canal should have a delayed diagnosis and consequently poor prognosis.

5. It is likely that the salvage rate of patients with these lesions will be improved if all ano-rectal lesions, even those apparently most insignificant, are reviewed with suspicion, biopsied and treated according to their clinical and pathologic features, as outlined.

BIBLIOGRAPHY

1. Bacon, H. E.: Anus, Rectum, Sigmoid Colon, Diagnosis and Treatment. Philadelphia, J. B. Lippincott, 1949.
2. Jackman, R. J.: Submucosal nodules of the rectum: diagnostic significance. Proc. Staff Mtgs. Mayo Clinic, **22**:502-504, (Oct. 29) 1947.
3. Dixon, C. F., Dockerty, M. B., and Powelson, M. H.: Squamous cell carcinoma of the mid-rectum: report of a case. Proc. Staff Mtgs. Mayo Clinic, **29**:420-423, (July 28) 1954.
4. Rosser, C.: Etiology of anal cancer. Am. J. Surg., **11**:328-333, (Feb.) 1931.
5. Simons, Milton (Dept. of Path., U. of Nebr.): Personal communication.
6. Scherman, V. E., Hara, M., and Trafton, H. F.: Massive hemorrhage from carcinoid of the stomach. J. Missouri M. A., **46**:175-177, (March) 1949.
7. Mrazek, R. G., Jr., Godwin, M. C., and Mohardt, J.: Carcinoid tumors. Surg. Gynec. & Obst. **96**:661-673, (June) 1953.
8. McQuarrie, H. B., and Buie, L. A.: Epithelioma of the anus. Postgrad. Med., **7**:402-409, (June) 1950.
9. Fisher, E. R., and Turnbull, R. B., Jr.: Malignant polyps of the rectum and sigmoid: therapy based upon pathologic considerations. Surg. Gynec. & Obst., **94**:619-625, (May) 1952.
10. Pack, G. T.: Problem of malignant melanoma. In: Proc. Second National Cancer Conference (American Cancer Society, New York City), **1**:54-70, 1954.

AMEF Gives Awards of Merit

Dr. Louis H. Bauer, former president of the AMA and now president of the American Medical Education Foundation, presented awards of merit from his organization inscribed to Dr. J. P. Cogley, of Council Bluffs, and to the Baldridge-Beye Memorial Fund of the Iowa State Medical Society, at the Atlantic City Meeting of the AMA during the first week in June. Dr. L. A. Coffin, of Farmington, president of the ISMS, accepted them for Dr. Cogley, who had been unable to attend, and for the State Society.

The citation, identical on the certificates inscribed to the Fund and to Dr. Cogley, reads: "For your outstanding contribution to the preservation and continuation of medical education in the United States of America."

What Do We Expect of Adolescents?

HUNTER H. COMLY, M.D.

IOWA CITY

To MANY OF US the mere word *adolescence* automatically brings to mind a series of unpleasant ideas and expectations. The word *juvenile* by reflex calls forth its most common sequel, *delinquent,* just as predictably as *Gilbert* evokes *Sullivan, Scotch* suggests *soda,* and *peas* suggests *carrots.* Adolescence, like March, is expected to be stormy. A juvenile, like April, is expected to produce a reign of terror.

It will be a purpose of this paper to review and illustrate a few of the behavior disturbances and mental disorders that psychiatric study has shown to be present among these juveniles who make the headlines, and to comment briefly upon their etiology and treatment. When this stereotype is broken up, syndromes emerge which are meaningful in discussion and helpful in our attempts to predict later behavior. I shall mention six broad syndromes by name, each one of which calls for different treatment. I shall then illustrate three of them with short case histories so as further to clarify the diagnosis and provide some grasp of the motivation and etiology. Thus, I hope to stress again the need for recognition, differential diagnosis and appropriate treatment. Those objectives can be achieved only through the enlightenment of professional and public opinion about mental disorders. But they must be achieved before communities can be provided with plans, personnel and equipment that are necessary for dealing effectively with the nation's No. 1 public health problem.

The juvenile delinquent who undergoes a psychiatric examination may have one of the following diagnostic terms entered upon his record card: (1) brain disorder, (2) psychoneurosis, (3) personality disorder, (4) mental deficiency, (5) psychosis, (6) transient situational personality disturbance. Of course the facts developed during the examination may indicate a further classification into any one of many descriptive subcategories under each of those broad headings. The subcategories and neat codifications, however, only begin to break up the stereotype so that we can view the dynamic and magnificent human struggle toward adjustment which lies hidden behind the juvenile's façade and which is obscured by our prejudices and ignorance.

Permit me to take you behind the scenery, so that we may follow such a struggle in each of three juvenile delinquents.

Dr. Comly is a staff member in the Departments of Psychiatry and Pediatrics at the College of Medicine of the State University of Iowa.

CASE NO. 1

Jimmy R., age 11, had had bilateral subdural hematomas in infancy, with surgical treatment at four months of age. He was a restless baby, an overly active runabout, and a slow learner in school. He was irritable, distractible and remarkably callous to pain. His moods were unpredictable. Speech was slow to develop. In the early grades, he repeatedly forgot recently learned material. He exasperated his teachers because he so frequently left his seat. He frightened the other children with his impulsive retaliations; he tore children's clothes and books; he kicked and scratched the teacher; and he was finally expelled from school at the insistence of the other children's enraged parents. His own father and mother, hurt, humiliated and bewildered by this rejection, took out their feelings on the boy and upon the school administrators. The latter retaliated by advising them to send their son to an institution for the feeble minded. Upon psychiatric examination, the patient was found to be distractible, irascible, brash and hyperkinetic. There were subtle but definite neurologic signs such as tics, fine tremors, and immature postural and neck-righting reflexes. The EEG was abnormal. The clinical psychologist found a normal verbal I.Q., but retarded performance abilities, with marked intra-test variability and short attention span. The psychiatric social worker permitted the parents to pour out their resentments and bitterness.

Dexedrine sulphate, 12½ mg. morning and noon, was prescribed, and after two weeks the parents reported a remarkable change. When Jimmy's sister bumped into him accidentally, Jimmy said, "Pardon me," although formerly he had always hit back. A conference was held between the school administrator and the psychiatrist. The administrator vented his hostility toward the family, the boy and the family doctor. The characteristic behavior of brain-injured children was reviewed with him, and reluctantly he agreed to consider readmitting the boy to school in another part of town where Jimmy's reputation as a bully wasn't so infamous. Six weeks later he wrote to tell us that the boy was getting along very well, was making fair progress in school and had found new friends. People's expectations of Jimmy had changed.

CASE NO. 2

Roger S., age 12, was referred after getting into trouble for illegal entry and fire-setting. A com-

posite of the parents' and the patient's accounts (secured during several hours of interviews) permits us the following view of the delinquent behavior.

Roger was the elder of two sons, and his birth and early development had been unremarkable. He had been rigidly trained regarding cleanliness, and his anxious parents had severely punished him for manifestations of sexual curiosity. When he was five and his brother was three, a neighbor woman had caught her four-year-old daughter and the two boys mutually exhibiting their genitals. When she had indignantly accused the boys, Roger's father had administered a sound thrashing to both of his sons. But a few days later, after Roger's mother had seen the same little girl exposing herself again to Roger and Russel, the boys' father was told of the little girl's seductiveness and the little boys' innocence and was overcome with guilt. He vowed he'd never again whip his boys. When Roger was ten, his younger brother died of encephalitis, and in their grief both parents redoubled their emotional investment in Roger.

A few months before the fire-setting episode, Roger began a paper route. There, he associated with boys a bit older and less inhibited than he. He was introduced to smoking and adolescent sexual discussions and practices. During the same period, his paper route took him to various houses and apartments in a suburban area. One of his customers was a young divorcee who lived alone in an apartment above a store. This woman was quite friendly with Roger, sometimes invited him into her apartment and gave him cookies and milk. But frequently she failed to pay him for the newspapers. She would often put him off with some evasion, yet invited him into the apartment frequently, even though she was not fully clothed at all times.

A couple of days before the fire-setting act, Roger's father smelled stale smoke in the boy's bedroom and noticed a burn through the bedspread. When Roger came home, he received a severe thrashing from his father for the second time in his life.

On the day of the episode, Roger was making his rounds of collections. In front of the store below the divorcee's apartment, he was accosted by one of the other newsboys who suggested that Roger again engage in sex play with him. Roger was confused, humiliated, angry and guilty. The boy taunted him about the recalcitrant divorcee. In a blind fury of determination, Roger turned away from the boy, clutching a rolled newspaper in his fist. He was so visibly disturbed that the store manager, who caught a glimpse of him, reported to the authorities on a part of the incident as he had seen it through his store window. Roger bounded up the stairs, knocked at the door but received no reply, and entered the apartment. Finding the lady's dress draped on her bed, and being sexually aroused, he ignited the rolled up newspaper and, using it as a torch, burned the pubic area of the skirt. Then, frightened, he beat out the flames. Finally, he stood in front of her mirror, put some of her powder on his face, spilling traces of it in the process. Subsequently, the store manager saw him leaving the apartment without the paper, and, of course, the lady reported the break-in and fire to the police. A short inquiry led to Roger's apprehension.

CASE NO. 3

Jerry R., age 15, was referred after repeated episodes of stealing. The most recent incident had involved the theft of money and of a bicycle which he rode to a highway junction. From there he hitchhiked to St. Louis. A cruising squad car picked him up for questioning, and he was sent back to the authorities in his home town. A probation department referred the patient to Psychopathic Hospital and enlisted the aid of the child welfare worker in developing the history prior to the examination date.

At the time of Jerry's psychiatric examination, the following pertinent facts were known to the psychiatrist. Jerry was the fourth of five children. There were two sisters, ten and twelve years older, a brother six years older and a sister two years younger. When Jerry was four years old, he had seen his father commit suicide, a tragedy which led to the breakup of the family. The mother, long ailing, died a few months later. The older daughters and son were placed in a state institution. Jerry was taken into the family of distant relatives and subsequently adopted. The younger sister was adopted by another family and moved out of the state.

It was known that Jerry's brother had subsequently become delinquent, had been committed to the State Training School, had been released and then recommitted, and at the time of Jerry's examination was serving a long term for robbery in the State Reformatory. It was further known that the offense that led to the brother's first commitment had involved the theft of a bicycle, running away and hitchhiking to Des Moines, from where he was returned and consigned to the State Training School.

When Jerry was interviewed, the psychiatrist was impressed with his insolent swagger, tough-guy veneer and various affectations reminiscent of the "Dead End Kid" stereotype of the juvenile delinquent. He bristled with hostility, but was nevertheless cooperative in answering questions when he was met with the attitude "I dare you to talk." It gradually became apparent to the psychiatrist that Jerry was overplaying his role and was picking up every challenge to present himself in as bad a light as possible. He was encouraged and permitted to talk, and he rambled on about

his various delinquent escapades of the preceding couple of years.

At last the most recent episode came up for discussion. Jerry, picking up the gauntlet with a kind of forced gaiety, related the details—how he had broken into the house, had stolen the money, had swiped a speedy bicycle, had ridden it to a highway intersection, had ditched it behind a clump of trees, and had taken off for ..... But here he slipped up, and the role gave out. The story should have gone, ". . . taken off for St. Louis." Instead, however, he made a slip in speech and said, "Des Moines" though actually Des Moines was in the opposite direction. He looked at the psychiatrist as if trapped. Tears gathered in his eyes.

The psychiatrist, leaning toward him, felt a lump rise in his own throat as he saw the boy's discomfort, and merely said quietly, "You were thinking about your brother." Hot tears burst forth, and Jerry's act dissolved into convulsive sobbing. The psychiatrist sympathized with him, patted his hand and asked him how long he had felt so sad and unhappy. With great feeling Jerry said, "As long as I can remember."

Then the boy told about a recurring dream which always involved a broad expanse of lawn upon which were placed large tombstones of various shapes. In his dream, a section of the sod rolled up like a carpet and moved toward him. Each time this occurred, Jerry awakened terrified and crying. He had had this dream for as long as he could recall. Later, it developed that he had no conscious memory of his parents' death.

When he left the office with the psychiatrist, he was a little, lonely and dejected boy. The tough-guy stuff was all over. His adoptive parents were overcome with surprise. Jerry had given the psychiatrist permission to relate his story to his adoptive parents—about his depression and loneliness, his great need to see his brother, whom he had not seen for nine years. Any positive feelings Jerry had expressed for his brother had been discouraged in the adoptive home. The parents had been so afraid that Jerry would "inherit" a mental instability that, from very early in their relationship with him, they fostered his "forgetting" his family and past, and as some of the details of the older boy's unhappy life filtered in, they had censored and forbidden the musings and questions that Jerry had attempted to voice. Meanwhile, they had anxiously expected the worst from their adopted son. Because they were unable to trust Jerry, they had blocked his efforts to express his grief and rage at the loss of his family. He was consequently unable to transfer complete loyalty to his adoptive parents. Though finally he almost succeeded in covering up his tender feelings, he still was drawn by the one remaining significant identification of his early years.

When the parents understood what Jerry's emotional problem was, their attitude softened toward him. He subsequently made a good adjustment.

DISCUSSION

Space doesn't permit the inclusion of case illustrations of the last three diagnostic categories. These three histories were chosen to exemplify a few important aspects of adolescence. The first patient reminds us that highly disordered behavior may result from very subtle damage to the brain. This truth imposes a major share of responsibility for the understanding of delinquency squarely and inescapably with the medical profession.

Roger, our second patient, gave us a good opportunity to see some of the struggles of an adolescent, neurotic boy trying, among other things, to establish his sexual identity. His story points up the folly of stereotyped punitive procedures that may be employed in dealings with delinquents.

Both Roger's and Jerry's histories illustrate especially well, I think, the main points I wish to make regarding part of the basic etiology of antisocial behavior. In both instances we see adults communicating their fearful expectations that the child will get involved in serious trouble. We adults may have images in mind containing fantasies of the destructive potentialities and antisocial proclivities of children. At critical moments, this image may be revealed to the youngsters with damning clarity. Of course the child is shocked, hurt and enraged that the adults to whom he is most attached have exhibited this lack of trust in him and have put a low evaluation upon his abilities. Hardly believing this possible, he tests to find out what it is of which they really think him capable. An adolescent girl whom we recently saw was struggling with her jealous, competitive feelings and rivalry with her eight-year-old half-sister for her stepmother's affection. She was not helped to feel good about herself when her stepmother chose to read aloud to her father—of all the things in the newspaper—an account of a 16-year-old girl who had beaten her little sister insensible with a hammer. The latent meaning behind her stepmother's choice was made crystal clear to her when her request that the stepmother read an account of a car wreck was refused.[1, 2]

The adolescent is newly burdened with spectacular changes in his own body and feelings, faced with the problem of outgrowing his childish conscience, obliged to make choices of a mate and a career, and needing to emancipate himself from his childish dependencies. He hardly knows himself. He is frightened by his dreams, his introspections, the world outside, and the times ahead. He searches for ideologies and readily fastens

upon one, regardless of its soundness, if it promises to bring a measure of orderliness and comprehensibility to him in his relationship to a confusing world.[3] Thus, he may become an avid protagonist of Communism, Nazism, or, hopefully—but with more struggle and pain—democracy. Having grasped and accepted an ideology or system, he has largely concluded his search for a sense of identity—that is, his search for a knowledge of who he is. The community takes him at face value in this role that he has assumed, and it helps him to mold and congeal this self-created image—be it a constructive or a destructive one. The potential tragedy of this dynamic set of circumstances lies in the fact that if the adolescent feels unloved and unsupported in his original struggle to be good and constructive, and is denied recognition for his positive capacities, he must adopt an identity of some other sort, even a negative or bad one. To remain for long not knowing who and what one is brings unbearable and disorganizing panic. So the youth may finally decide with devastating finality and conviction, "If I can't be recognized as good, I'll be recognized as the best (i.e., most outstanding) bad person possible." Or put another way, "If I have the name, I might as well have the game."

That grownups have viewed with alarm, pointed with horror and projected their own inadequacies into a stereotyped concept of the nature of youth for a long time is proved by the couplet:

Come listen now to the good old days when children, strange to tell,
Were seen, not heard, led a simple life, in short, were brought up well.

Those lines were written by Aristophanes, 25 centuries ago.

But since then, a science of human behavior has come into being. We have much of the knowledge necessary to predict and constructively to alter human behavior. We know that further research will greatly improve our abilities in this direction. As yet, the citizens of Iowa have not understood the essential benefits that will come from providing facilities for individualized study and comprehensive research as a means of finding the causes of disordered behavior among children and youth.[4] It will be cheaper in the long run for us to learn more about adolescents. As we learn more about them, we can't continue to react to them in a stereotyped fashion. The more we understand them, and ourselves, the fewer delinquents—child, juvenile or adult—there will be.

REFERENCES

1. Johnson, Adelaide, M.: Sanctions for superego lacunae of adolescents. In: Searchlights on Delinquency, ed. by K. R. Eissler. New York, International Universities Press, 1949.
2. Johnson, A. M., and Szurek, S. A.: Etiology of antisocial behavior in delinquents and psychopaths. J.A.M.A., **154**:814-817, (Mar. 6) 1954.
3. Erikson, E. H.: Identity and totality: psychoanalytic observations on the problems of youth. Fifth Annual Symposium, Committee on Human Development, U. of Chicago. Ann Arbor, Edwards Brothers, Inc., 1954.
4. H. F. 41, 56th General Assembly of Iowa, 1955 (and the companion Senate Bill): An Act to Establish Facilities to Provide for the Care, Diagnosis, Treatment and Training of Emotionally Disturbed Children and Mentally Retarded Children and to Provide for Their Operation by the State Board of Education as a Part of the State University of Iowa.

Death Risks in Medical Partnerships

The pamphlet entitled "Prescription for Medical Partnerships,"* by Dr. Charles Maertz, medical director of the Union Central Life Insurance Company, contains some common sense advice to which all medical associates should pay heed. When a doctor dies, Dr. Maertz points out, he doesn't leave the usual tangibles such as raw material, inventories and salable good will. "While his patient records are of considerable worth to anyone assuming his practice, their actual monetary value is difficult to define and their 'sale' extremely uncertain. Accounts receivable are subject to shrinkage and uncertainties of collection. There may be little cash on hand. Supplies are generally of negligible value."

"In some cases," Dr. Maertz says, "the widow is given her late husband's accounts receivable; the survivor retains equipment and supplies; and the cash, if any, is divided. Collecting the receivables may expose the widow to unforeseen complications. What is the value of work in progress which has not been billed? Or, if two partners have been attending one patient, who is to determine how the fee should be divided? . . . Any doctor may have heard of actual instances that resulted in unfavorable publicity and expensive litigation for both parties."

Though every medical partnership should have a written agreement designed to avoid death-settlement complications, Dr. Maertz reports that very few have anything of the sort. He suggests that unless or until there constantly is enough cash on hand to permit the surviving partner(s) to pay a widow the equivalent of several years of her late husband's earnings, the doctors should maintain insurance policies on one another's lives. But in any case, there certainly ought to be an agreement in writing that is sure to prevent death-settlement disputes.

* Available gratis, from the Company's Field Service Division, P.O. Box 179, Cincinnati 1, Ohio.

Some Aspects of
Macular Degeneration

FRANK W. NEWELL, M.D.

CHICAGO, ILLINOIS

THE STEADILY growing number of individuals in the older age groups has directed attention toward degenerative processes of all types. In the realm of ocular disease, considerable progress has been made in decreasing the incidence of blindness in conditions which, in the past, have crippled many. Thus, modern surgery of cataract, with all of its safeguards, the early diagnosis and treatment of glaucoma, and chemotherapeutic control of infection have done much to eliminate what previously have been the most frequent causes of defective vision.

Macular degeneration, at present, is the outstanding cause of loss of vision in the elderly. Each ophthalmologist knows how many of the pleasures, relaxations and productive activities are denied to the aged because of loss of function in an area of retina which measures but one-half a millimeter in diameter.

This minute area, however, contains some 34,000 cones (Polyak), each probably having individual representation all the way to the occipital cortex. Interference with this foveal area results in a loss of central vision to the degree that commonly not even the 20/200 letter can be seen. It is this loss of central vision which precludes reading, prevents recognition of familiar faces, and places an island of blindness in the center fixation so that an everlasting tedium afflicts many a previously active individual.

Macular degeneration can be defined as the end result of any process which disturbs the function of the central area of the retina. The macula lutea (yellow spot) itself covers a much greater area than does its central core, the fovea, and many conditions may interfere with its function, but as long as the fovea is spared, vision is not seriously affected. Even minor involvement of the fovea, however, may give rise to a decrease in central vision.

TYPES

Degeneration of the macula can be divided into primary and secondary conditions. The primary type arises from a genetically transmitted defect, it is familial, it is not due to external cause. It is bilateral and it is progressive. The secondary type follows vascular or inflammatory disease, it is commonly unilateral, it frequently does not progress after the noxious influence has been removed, and it is familial—although this last factor may be impossible to evaluate in elderly persons.

The classification of macular degenerations is of more than academic importance. By definition and by nature, there is no remedy for the primary condition, and there will be none until there is some method of modifying the results of defective gene transmission, or until it is known why certain cells and systems in the body mature and die before other body cells. The secondary forms are, at times, amenable to therapy, although in many conditions, particularly those secondary to vascular disease, therapy is not markedly dramatic.

The primary macular degenerations can be subdivided into those with central nervous system involvement and those without such complication. Conditions which affect the ganglion cells of both the retina and the brain, or the cerebromacular degenerations, include amaurotic family idiocy (Tay-Sachs) and the late infantile and juvenile (Batten) types. The involvement of the central nervous system frequently leads to early death of these children, and undoubtedly many cases are not diagnosed because the fundi have not been examined.

The most important entity of the group without central nervous system involvement are the hereditary macular degenerations which have been classified by Sorsby as dystrophies of the macula. Included in that group are most of the conditions which in the past have been known by a large

TABLE 1

PRIMARY MACULAR DEGENERATION

With Central Nervous System Involvement
Cerebromacular degeneration
Amaurotic family idiocy
Infantile (Tay-Sachs)
Late Infantile
Juvenile (Batten)
Niemann-Pick disease
Without Central Nervous System Involvement
Heredodegeneration of the macula
Infantile
Congenital macular (Best)
Juvenile (Stargardt)
Adult (Benr)
Pre-senile
Senile (Haab)
Honeycomb choroiditis (Doyne)
Macular coloboma
Central choroidal sclerosis
Anginoid streaks

Dr. Newell is professor and chairman of the Section of Ophthalmology, at the University of Chicago.

variety of eponyms. In those conditions, there is considerable lack of uniformity as regards the genetic behavior, the age of onset, the course and the effect upon vision. However, in the same family the condition tends to be similar as regards age of onset and appearance, although the macular lesions are not necessarily identical.

Clinically, the lesion covers an area of one-half to five disc diameters. When large, the area of involvement is not sharply defined, although the central area may be well demarcated. Ophthalmoscopically, there is considerable variation in the appearance of the macular lesions, despite the fact that generally they tend to be much the same in the two eyes. The damage varies in severity from a loss of macular lustre to a considerable pigmentary reaction, with an atrophic scar. Optic atrophy is not associated with the macular lesion, and thus the ganglion cells of the retina are not involved. Three types of the condition occur: (1) the pigmented type, which may represent an inverse retinitis pigmentosa, (2) the exudative type, and (3) the atrophic type.

The age at the time of occurrence has occasioned considerable comment. In 1920, Behr classified the heredodegenerations of the retina as infantile, juvenile, adolescent, adult, pre-senile and senile. These, in turn, were correlated with the physiologic epochs of birth, secondary dentition, completion of skeletal growth, maturity, menopause and, finally, death. It is questionable how reliable those age distinctions are. It must be recognized that commonly the age of onset is given as the age at which the first symptoms appeared, even though the condition may have existed for some time prior to that.

Of the various groups, the infantile and the senile heredodegenerations were previously considered the most uncommon. Now, however, with increasing frequency many of the macular disturbances previously diagnosed as senile macular degeneration secondary to sclerosis of the choriocapillaris are considered to be true hereditary afflictions. It is a problem, however, which can be resolved only by many correlations of histologic studies with the appearance of the disease.

The outstanding symptom of heredomacular degeneration is the loss of central vision which may precede ophthalmoscopic changes. The visual defect may be relatively mild, or so severe as to cost all central vision and color vision. Despite the fact that patients do not complain of it, a central scotoma with normal peripheral isopters is indicated by a study of the visual fields. There may be a progressive deterioration through life.

The secondary group of macular degenerations may be due to severe ocular trauma, to inflammation involving the macular area, to distant inflammation causing edema of nerve fibers in direct contact with the vitreous, or to vascular disease affecting the area. Occlusion of even a minute vein near the macula may cause a disastrous hemorrhage which destroys the delicate cones and causes permanent loss of central vision.

By far the most common group of secondary macular degenerations are those arising from alterations in the blood supply of the choriocapillaris. Since these blood vessels cannot be seen directly, it is not immediately evident that these lesions are a secondary phenomenon. This problem is not generally so difficult with other secondary lesions in which the cause becomes evident either by careful history-taking or from observation of the ophthalmoscopic signs.

TABLE 2

SECONDARY MACULAR DEGENERATION

Inflammatory	*External*
Choroid	Blunt trauma
Retina	Radiant energy
Distant intraocular	
Vascular	*Refractive*
Choriocapillaris	Myopia
Senile degeneration	Hyperopia
Hyaline degeneration (Drüsen)	
Disciform (Khunt-Junius)	
Retinal	
Venous occlusion	
Arterial occlusion	
Angiospastic	

Changes due to sclerosis of the choriocapillaris are usually classified as senile macular degeneration, which is characterized by punctate degenerative changes limited to the area. Clinically, the changes may be difficult to distinguish, but when on clinical examination no obvious cause can be found for visual deterioration, careful study of the macula may reveal fine pigmentary changes. The condition usually starts unilaterally, but after some time—perhaps many months or even years —the other eye is almost invariably affected.

When there is progressive sclerosis of the small choroidal twigs supplying the macular region, a hemorrhage may extravasate between the pigment epithelium and Bruch's membrane, producing the picture of disciform degeneration of the retina. The condition is frequently bilateral, characterized ultimately by the development of a localized mass of organized tissue situated under the retina. Such a picture may have a composite etiology, but one known cause is hemorrhage between Bruch's membrane and the pigment epithelium.

The typical case develops in a patient past middle life who has arterial disease; it is most common in the sixth decade; males are more commonly affected than females; and in more than half of the cases, the condition is bilateral. It commences with a hemorrhage at the macula and terminates with the presence of tumor-like masses of organized tissue at the macular region which abolish central vision.

Frequently, the other macula betrays choriodal sclerosis—pigmentary changes, drüsen, white exudative spots and the like. In all unilateral cases

observed that have become bilateral, the second eye has been observed to show such changes. Thus, it seems quite possible that choroidal sclerosis may be a constant precursor.

Hyaline deposits of the lamina vitrea known as drüsen may, when large or centrally located, cause a form of central retinopathy due to pressure on visual cells. Although classed here as the results of vascular alterations of the choriocapillaris, most cases, by and large, should be classified as Doyne's honeycomb choroiditis. Additionally, the dots are seen in anginoid streaks of the retina, in disciform degeneration and in many diseased eyes.

CORRECTIVE DEVICES AND MEDICAL THERAPY

After marked decrease in central vision, some patients obtain useful vision with telescopic lenses, special magnifying lenses and the like. Thus, although the proportion of patients who obtain satisfaction with them is disappointingly small, each patient should have a chance to try such devices before the decision is made that they cannot be used.

Medical therapy varies considerably with the cause. Those degenerations which are due to trauma or to inflammation may be favorably influenced by systemic cortico-steroids administered over a long period. Local administration of these hormones or of any other drug has no value. In occlusive vascular disease, Dicumarol therapy may be of unusual value if begun early enough in the disease.

In the common senile macular degenerations arising from alterations in the blood supply to the choroid, there is, unfortunately, very little that can be done. Systemic vaso-dilators, iodides, vitamins and many other compounds have been used, but there seems to be nothing which will stem the inexorable course of the affection. The iodides are not without risks, and although widely used, they have never been proved valuable. Leopold has shown that most compounds which cause systemic vaso-dilation either have no effect on the choroidal circulation or cause vaso-constriction. Thus, until an effective treatment is devised for combatting the vascular sclerosis in the choriocapillaris, there is little treatment of avail.

Commonly, the most the physician can do is to reassure these patients that the condition will not progress to blindness. Although the central vision is lost, the disease never involves the peripheral retina enough to eliminate so much of the patient's sight that he is rendered helpless. One should never omit telling the patient that he will always see well enough so that he will not become a burden upon others, for that knowledge is frequently most reassuring to him.

Danger in Candy-Flavored Medicines

The AMA Committee on Toxicology is concerned about an apparent increase in poisonings among children, and has come to the conclusion that attractive packaging and flavoring are largely responsible. "Among preschool-age children, the age group in which accidental poisoning is most frequent," the Committee states, "drugs are reported to be responsible for 33 per cent of the fatal poisonings. . . . Children's death rates from the ingestion of poisons are four times higher in the United States than in England, even though over-all death rates for both countries are generally comparable."

Because the forms on which doctors report deaths have not invited their opinions as regards the children's motivations, there is no certainty that youngsters are mistaking the medications for candy, but a marked increase in production of attractively packaged, colored and flavored preparations has paralleled the rise in fatalities. Over-the-counter sale of candy-flavored aspirin was first permitted in 1948, though such preparations had been available on prescription since 1932. In the prewar period, no more than 20 per cent of aspirin fatalities involved children of preschool age, but in 1951, the latest year for which full statistics are available, 80 per cent of aspirin deaths occurred in children under 5 years of age.

The influence of candy flavoring on nonfatal aspirin poisoning is even more difficult to discover. The Chicago Poisoning Control Center reports that 84 of its first 500 cases involved aspirin, and of those, 73 were caused by children's aspirin. Thus, children's aspirin was responsible for 14.5 per cent of the 500 cases, and for 87 per cent of the aspirin cases.

Other potent drugs, such as barbiturates, antibiotics and sulfonamides, though somewhat less readily available to purchasers, may be equally easy for youngsters to get from their family medicine cabinets. And when they have been disguised as rock candy, lollypops and fruit-flavored syrups, they are tantalizingly attractive.

The public should be informed and constantly reminded that many of these products that are packaged and flavored like candy are potent drugs, overdoses of which can be dangerous or even fatal.

Coming Meetings

In State

Sept. 15-16	Annual Meeting, Iowa Academy of General Practice, Des Moines
Oct. 13-14	Joint Meeting, Mississippi Valley and Iowa Trudeau Societies, Des Moines

Out of State

July 1-4	Eastern Div., International Col. of Surgeons, Chatham Bars Inn, Cape Cod
July 11-15	Symposium on T-B and Other Chronic Pulmonary Dis., Saranac Lake, New York
July 11-22	Electrocardiography and Heart Dis., Cook Co. Grad. Sch. Med., Chicago
July 13-14	Rocky Mountain Cancer Conference, Denver
July 19-30	Surgery of Elbow and Shoulder, U. of Calif., Los Angeles
July 21-22	Surgery of the Hand, U. of Calif., Los Angeles
July 25-29	Recent Advances in Medicine, U. of Calif., Los Angeles
July 25-Aug. 5	Surgical Technic. Cook County Grad. Sch. of Med., Chicago
Aug. 8-12	Hypnosis, University of Calif., Los Angeles
Aug. 8-19	Surgical Technic. Cook County Grad. Sch. of Med., Chicago
Aug. 8-Sept. 2	Surgical Anatomy and Clinical Surgery. Cook County Grad. Sch. of Med., Chicago
Aug. 18-20	W. Va. State Med. Assoc., The Greenbriar, White Sulphur Springs, W. Va.
Aug. 22-Sept. 2	Surgical Anatomy and Clinical Surgery. Cook County Grad. Sch. of Med., Chicago
Aug. 28-Sept. 2	American Congress of Physical Medicine and Rehabilitation, Detroit
Aug. 29-31	Anesthesia, University of Calif., Los Angeles
Sept. 7-9	Office Psychotherapy in Psychosomatic Problems (U. of M.), Itaska Park, Minn.
Sept. 7-9	Minnesota Symposium on Arteriosclerosis, Mayo Memorial, Minneapolis
Sept. 8-10	Rehab. Neuromuscular and rheumatic diseases. Creighton Memorial St. Joseph Hospital, Omaha
Sept. 12-23	Surgical Technic. Cook County Grad. Sch. of Med., Chicago
Sept. 12-30	Gynecology and Obstetrics. Cook County Grad. Sch. of Med., Chicago
Sept. 12-16	Advanced Course in Gastroscopy. Cook County Grad. Sch. of Med., Chicago
Sept. 19-23	Surgery of Colon and Rectum. Cook County Grad. Sch. of Med., Chicago
Sept. 19-Oct. 1	Symposium on Otolaryngology, Univ. of Illinois, Chicago
Sept. 26-Oct. 7	Medicine. Cook County Graduate School of Medicine, Chicago
September 26	Eight-week course in Industrial Medicine, Postgraduate Medical School of New York University, Bellvue Hospital, NYC
Oct. 3-6	Fall Clinical Conference, Kansas City-Southwest Clinical Society, Municipal Auditorium, Kansas City, Missouri
Oct. 3-7	Thoracic Surgery. Cook County Grad. Sch. of Med., Chicago
Oct. 3-14	General Surgery. Cook County Grad. Sch. of Med., Chicago
Oct. 10-14	Occupational Skin Problems, University of Cincinnati
Oct. 10-14	Esophageal Surgery. Cook County Grad. Sch. of Med., Chicago
Oct. 10-14	Pediatric Cardiology. Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	Electrocardiography and Heart Disease. Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	Clinical Uses of Radioisotopes. Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	Urology. Cook County Graduate School of Medicine, Chicago
Oct. 17-21	Pediatric Cardiology. Cook County Grad. Sch. of Med., Chicago
Oct. 17-28	Fractures and Traumatic Surgery. Cook County Grad. Sch. of Med., Chicago
Oct. 17-28	Dermatology. Cook County Graduate School of Medicine, Chicago
Oct. 24-27	Annual Assembly of the Omaha-Midwest Clinical Society, Hotel Paxton, Omaha
Oct. 24-Nov. 4	Gastroenterology. Cook County Grad. Sch. of Med., Chicago
Oct. 26-27	Annual Meeting of the Missouri Academy of General Practice, Jefferson City
Oct. 27-29	Postgraduate Gastroenterology (Am. Col. Gastroenterology), Chicago



INCREASE IN DUES

Members of the Iowa State Medical Society have received notice of a special assessment increasing their dues for 1955 in the amount of $25, payable through their county medical societies. This special assessment was considered necessary by the Board of Trustees because of an expanded educational and public relations program to preserve the Medical Practice Act.

Specifically, when the Iowa Hospital Association resorted to legal action as regards what the attorney general had declared the corporate practice of medicine by hospitals, there was not other recourse for the State Society than to defend its stand in the courts. The expenses of that litigation must be underwritten without depletion of the Society's reserves.

A PICTURE OF INDUSTRIAL MEDICINE IN IOWA

A statistical summary of responses to the Industrial Health Committee's questionnaire appeared under a title identical with the above in the June issue of the JOURNAL. As we commented in presenting that summary, the remarks which the Committee invited and which many doctors took time to write on the subject of industrial medicine in Iowa seemed quite as important as those of their answers that could be tabulated. Consequently, we propose to quote representative ones of them more or less verbatim. For the sake of brevity and, in some instances, clarity, we have edited them somewhat, but we have taken care to avoid misrepresenting any doctor's intent.

NEED FOR AN EXHAUSTIVE STUDY

"I feel that there should be more meetings of management, labor and physicians so that all of us can get a better understanding of our respective responsibilities and of what we are trying to accomplish. Through my consultation work, I have been given the impression that in many cases management wants the doctor to render a snap judgment on whether a case is of occupational origin, instead of a careful study to discover how much of a hazard was involved in the employee's job."

"I don't know of any problems in our city. However, focusing attention upon this matter may well uncover some. The Workmen's Compensation Laws and the demands of labor groups require good medical attention, and it is obtained in most instances."

"There is a growing industrial plant in our community and an industrial health program for it is being formulated. The plant manager and I would be very much interested in attending the proposed industrial health meeting."

"In our area most of the smaller employers have their employees use the services of family physicians, and the arrangement works quite satisfactorily. Nearly all of them carry compensation insurance, and settlements are satisfactory and prompt. The management-physician relationships seem cordial and cooperative."

With less than half of the doctors in Iowa doing any type of industrial work and at least 90 per cent of that half stating that less than five per cent of their income is derived from that type of practice, one can readily understand why there seems to be a general lack of concept of what now is considered a well-rounded medical program for group employment. If the smaller industries of our state are able to interest our profession in starting programs such as that which is advocated by the AMA Council on Industrial Health, many of the irregularities and difficulties that our members have described can be corrected at their source. The general outline of such a program is included in the "Introduction" in the DIRECTIVE FOR NURSES IN INDUSTRY, a copy of which will be sent shortly to each of the members of the Society. Family physicians and specialists outside of regular industrial work should take pains to read at least that section of the booklet.

A VARIETY OF TROUBLESOME PROBLEMS

"We find that some companies shop around among doctors for the one who will serve at the lowest fee, with the result that there is 'price cutting' and doctors accept the work at a loss. I believe that a state-wide average fee schedule would be useful for industrial as well as for private practice."

"I would certainly favor insurance adjusters' getting together to standardize their report forms, so that much of the time used in filling out forms could be given to the patient himself."

"Which patients need no more than first aid and which ones should be referred to the physician constitute a serious problem for in-plant personnel. There are occasional instances of too much first aid and too little medical care."

"I am a dermatologist, and my only industrial work is that which is referred to me. I dislike that sort of practice because of the attitudes of both patients and companies. Usually, the company is trying to slough the patient, and sometimes it is warranted in doing so. The patient often doesn't want very much to get well, and only a little bit of well planned carelessness can perpetuate a dermatosis."

"We occasionally have difficulty in collecting fees for anesthesia because insurance policies do not cover them. Some anesthesiologists feel that their fees should not be prorated, as Iowa laws sometimes permit them to be."

"We need a better understanding between doctors and the managers of small plants. Employees frequently don't respect doctors who work at the plant no more than part of the time."

"We sometimes are unable to collect an insurance fee because the company has failed to make a proper report of the injury to the insurance carrier."

These comments reflect some of the many sorts of difficulties, and the answers to some of them are to be found in the opinions expressed in others. It is well for us to remember that in all compensation cases, a triad exists: the patient, the management and the doctor. And in well over 95 per cent of Iowa cases there is a fourth party, the insurance carrier. We have reported a few representative observations that doctors have made on the subject of industrial medicine, but in order to show the whole picture, we should have had to solicit comments from men in management, labor and insurance. One of the projects of the Committee is to secure closer and more active association among these groups that are involved in the industrial health and accident program.

HOW CAN FREE CHOICE OF PHYSICIAN BE PRESERVED?

"Some companies employ full- and part-time doctors who will treat anything, provided that the patient comes to the office. At night, however, a company physician is not available. One large firm gives its nurse complete freedom to treat patients without medical supervision. If one of my patients is injured, must he go to the company doctor? Is this free choice of physician? I should like to hear some answers."

"In small towns where there are no salaried in-plant physicians and where all the doctors are general practitioners, industries are insisting that all employees go to the doctor with whom the company has made an arrangement. This procedure is certainly causing great injustice and is producing an equivalent of socialized medicine."

"I examine industrial cases for an insurance company, particularly to determine percentages of disability. In my opinion, qualified men should be called in earlier to handle serious injuries. Doing so would frequently cut down the amount of permanent injury or disability."

"Because this is a community of small employers, even part-time industrial medicine is impractical. The office manager, timekeeper or even the telephone operator decides what physician is to be called. Employees of two firms are told specifically to go to a doctor whose principal qualification is friendship with the managers. In some instances no distinction is made whether the 'doctor' is an M.D., a D.O. or a chiropractor.

"Any expense incurred in preliminary treatment by any doctor is included in the total legal allowance, a factor which, in cases requiring prolonged treatment, raises the cost to the patient. Then if the injured man can't finance the part of his care which his compensation won't cover, prolonged disability and absenteeism result."

The method of choice of physician in compensable injuries and sicknesses was most commonly the object of criticism by doctors. In this connection, the Committee urges all physicians to study the Iowa Workmen's Compensation Law and the policies that have been adopted for implementing it. A summary of the provisions, examined and approved by the Industrial Commissioner, is to be found on pages 123ff of A HANDBOOK OF RESOURCES AVAILABLE TO PHYSICIANS, a copy of which was sent to each of the members of the Iowa State Medical Society approximately a year ago.

REHABILITATION ADVANCES

It is encouraging that the Iowa legislature has taken cognizance of the needs of the Division of Vocational Rehabilitation of the State Department of Public Instruction by increasing its appropriations to $350,000. Thus, Iowa will be eligible for about $450,000 a year in federal rehabilitation matching funds, and the total sum available will have been increased around half a million dollars for the biennium.

As a result of this action by the legislature, it may be anticipated that 1,300 individuals will be totally rehabilitated each year, rather than about 800, as at present. In the case of a paraplegic, it has been estimated that total disability care amounts to $50,000. From an individual who enters the program of the Division of Vocational Rehabilitation, an expenditure of about $7,500 can produce a self-reliant and tax-paying citizen. Similar advantages of this program pertain to all types of disability.

We are indeed fortunate that our legislature has met a growing problem so well.

UNTOWARD DRUG REACTIONS

Following each devastating war comes a period of reactive stimulus. World War II was no exception. Our land has witnessed in the postwar period an era of tremendous activity in production and research. One sector of this activity has been the drug industry. The drug industry in turn has bombarded the medical profession with hundreds of new compounds. Many of these compounds are extremely potent. They may act to alter enzyme systems in the cells of the body. They may alter various body equilibria. These actions are for the most part desirable, but they are commonly associated with undesirable side effects.

Dr. Harry Alexander has recently written a book entitled REACTIONS WITH DRUG THERAPY* which is the first attempt to assemble in concise form the known facts about drug reactions. He estimates in his preface that over 350,000 substances have been used as drugs. Of these, less than 1000 are in common use today. Of the latter, a few hundred have induced hypersensitivity. The potentially harmful drugs on the market include antibacterial chemotherapeutic agents, antibiotics, antiarthritic drugs, drugs used in cardiovascular disorders, sedatives, antithyroid drugs, antihistamine drugs, organ extracts, sera, plant products, anesthetics and many miscellaneous agents.

Dr. Frank Heck, of the Mayo Clinic, and many others have long stressed the fact that it may be possible to predict the potentially dangerous effects of new drugs. Some contain benzene nuclei to which a labile NH_2 group, a chlorine atom, a sulfonic acid or arsenic acid group have been attached. Some are related to the pyrimidines; some to the quinones. Drugs such as furadantin, thorazine, mictine and diamox have potentially dangerous radicals in their molecules. Some of them have already exhibited certain deleterious side effects, and we await the result of experience on the others.

A new facet has therefore been added to the practice of medicine. One practicing physician reports that he recently has seen three patients with serious untoward drug reactions from three different drugs within one week. Perhaps the medical schools should add the subject of "Untoward Drug Reactions" to their curricula. At least, we practicing physicians must realize that we are in the biochemical era of medicine. We must acquaint ourselves with the basic skeletons of biochemical and organic compounds. We must learn the composition of the drugs that we prescribe so blithely. We must be acutely aware of possible deleterious side effects of the drugs we are using so that we may protect our patients

* "Reactions with Drug Therapy"; Harry L. Alexander; Philadelphia, W. B. Saunders Co., 1955.

from serious disease and even death from these compounds. It might be wise not to prescribe a drug the first day we become acquainted with it via the drug salesman, but to await reports in the literature from at least two well-known clinical groups. Finally, we should never forget the old dictum "Do the sick no harm."*

WORK SIMPLIFICATION FOR BETTER LIVING

Much praise is due the Division of Home Economics of Iowa State College, the Iowa Heart Association and the tuberculosis and health associations of Iowa for the excellent workshop presented at Ames, June 14-16. The theme, "Work Simplification for Better Family Living," was expertly developed by persons who are specialists and who know how to present information masterfully.

The purpose behind the workshop was that of training people in the principles of work simplification so that they, in turn, can assist the county tuberculosis and health associations in presenting educational or service programs to handicapped homemakers. Although aimed primarily at cardiac housewives, the program will be open also to other physically handicapped persons who need to conserve their energies. The principles of work simplification can be applied by anyone, and it is hoped, of course, that many people will put them into practice in order to allow themselves more time for improved family living.

The 31 counties that sent representatives will now be able to offer training to local people who need to apply the principles to their everyday chores.

One of the first papers read at the workshop gave a breakdown of age groups in different counties in Iowa, showing clearly the ones in which there is a preponderance of older people who are most likely to need a lighter work load. Those statistics will be helpful in pinpointing the areas where work simplification programs should be most helpful.

The principles underlying motion economy were outlined, and their application in many different fields was illustrated. One of the most valuable parts of the workshop was the stress placed upon application of principles to what a person already has available in the way of space and equipment, rather than upon the purchase of new equipment. Mrs. Ruth C. Kettunen, who is in charge of the cardiac homemakers' work-simplification project at Michigan State College, was the out-of-state specialist. She had brought many examples of kitchen equipment, both good and poor, and of other household equipment, so as to show how she conducts her courses throughout Michigan. She put great stress on the securing of family interest in the problem and on the achieving of family cooperation. In these "do-it-yourself" days, there are few husbands who can't construct some of the drawer dividers, rearrange cupboards, put casters on some of the chairs, etc. that will make work easier for their wives.

It was a down-to-earth workshop, packed with principles and with technics for utilizing them. Many members of the ISC staff participated and contributed valuable ideas. Films on work simplification prepared by members of the college staff proved excellent teaching media, and the registrants' interest in the entire program was intense. On the final afternoon, questions literally flew at the panel, and the resulting discussion lasted half again as long as had been planned.

Ideally, physicians should refer their cardiac and other physically handicapped patients to work-simplification programs that are being conducted in their areas. But in Michigan, newspaper and word-of-mouth publicity has accounted for most of the enrollment. Here in Iowa, the Medical Society has been kept advised of the plans being made for this sort of work, and the Woman's Auxiliary was alerted so that it might help see to it that county representatives were sent to the conference at Ames. In many respects, the program of work-simplification is one that will appeal greatly to Auxiliary members, and in our state, it is possible that the Auxiliary will prove to be one of its strongest supporters. We hope so.

LETTER TO THE EDITOR

Sir:

I wonder if the members of this Society realize the seriousness of the trial that is going on in Des Moines.

There is a determined effort being made by certain leaders in the hospital associations, both state and national, to have the pathological and radiological laboratories regarded as services on a par with the serving of food, and nursing care.

If this can be established, it will not be long before the Department of Surgery and other specialties will also come under services that a hospital has to offer.

All of these services would be administered by lay people, and medical men would be on a salary basis.

The attack is being made first on pathology since it is looked on as the most vulnerable part of the medical set up. Other members of the profession, thinking themselves safe, would pay only little attention while a group of their colleagues were taken over.

The statements I have just made have been repeated over and over, from time to time, by a few physicians who are aware of the situation.

* "Oath of the Hindu Physician," J.A.M.A., 157:1157, (Mar. 26) 1955.

Everyone should read the testimony of Vincent Starzinger, a director of the Iowa Methodist Hospital. Mr. Starzinger is general counsel for the Register and Tribune Company, and has practiced law in Des Moines since 1913. Mr. Starzinger's testimony appears in the June 11 DES MOINES REGISTER. He states: "These services (pathological and radiological) are *not* provided by farming them out to radiologists."

Some of the best departments I have seen have been either owned or leased by the radiologist, and I can name some for him to investigate. When I was studying radiology, the department of Drs. Pancoast and Pendergrass was one of the finest in the country. There was a pleasant association between it and the hospital.

In many cases the hospital management "milks" the radiological department so as to spend the money somewhere else, leaving the radiologist to do the best he can with inferior apparatus and inferior assistants.

When the services of radiologists and pathologists are no longer looked upon as the practice of medicine, then there will be no incentive for young doctors to enter those specialties.

ARTHUR E. PERLEY, M.D.
Waterloo, Iowa

OUR THANKS TO 1955 TECHNICAL EXHIBITORS

We wish to extend our sincere thanks to the firms listed below who exhibited at the 1955 Annual Meeting of the Iowa State Medical Society. It is the patronage of these firms which made it possible for us to hold the meeting, and we hope you will show your personal appreciation of their support when their representatives visit you.

Abbott Laboratories, North Chicago, Illinois
A. S. Aloe Company, St. Louis, Missouri
American Optical Company, Des Moines, Iowa
Bausch & Lomb Optical Company, Chicago, Illinois
Benson Optical Company, Minneapolis, Minnesota
Blue Cross-Blue Shield Plans, Des Moines and Sioux City, Iowa
The Borden Company, New York, New York
Chicago Dietetic Supply House, Inc., Chicago, Illinois
CIBA Pharmaceutical Products, Inc., Summit, New Jersey
The Coca-Cola Company, Des Moines and Atlanta, Georgia
Comfa-Lounge Massage Chair Company, Des Moines, Iowa
Dairy Council of Des Moines and Iowa Dairy Promotion Association, Des Moines
Dictaphone Corporation, Des Moines and New York City
Doho Chemical Corporation, New York, New York
Paul B. Elder Company, Bryan, Ohio
H. G. Fischer & Company, Franklin Park, Illinois
C. B. Fleet Company, Inc., Lynchburg, Virginia
Flint, Eaton & Company, Decatur, Illinois
E. Fougera & Company, Inc., New York, New York
General Electric Company, X-Ray Department, Des Moines, Iowa
Hoffman-La Roche, Inc., Nutley, New Jersey
Holland-Rantos Company, Inc., New York, New York
The House of Vision, Inc., Des Moines, Iowa
Lederle Laboratories Division, Pearl River, New York
Eli Lilly and Company, Indianapolis, Indiana
M & R Laboratories, Columbus, Ohio
Maico Des Moines, Des Moines, Iowa
Marion Laboratories, Inc., Kansas City, Missouri
Mead Johnson & Company, Evansville, Indiana
Medco Products Company, Tulsa, Oklahoma
Medical Aids, Inc., Chicago, Illinois
Medical Dairy Specialties, Inc., Chicago, Illinois
The Medical Protective Company, Fort Wayne, Indiana
Milex Products, Chicago, Illinois
Miller Surgical Company, Chicago, Illinois
V. Mueller & Company, Chicago, Illinois
Newgard X-Ray Company, Des Moines, Iowa
Parke, Davis & Company, Detroit, Michigan
Pet Milk Company, St. Louis, Missouri
Pfizer Laboratories, Brooklyn, New York
Physicians & Hospitals Supply Company, Minneapolis, Minnesota
Picker X-Ray Corporation of Iowa, Sioux City and Des Moines, Iowa
Professional Management, Waterloo, Iowa
A. H. Robins Company, Inc., Richmond, Virginia
J. B. Roerig & Company, Chicago, Illinois
Sandoz Pharmaceuticals, East Hanover, New Jersey
W. B. Saunders Company, Philadelphia, Pennsylvania
Schering Corporation, Bloomfield, New Jersey
Julius Schmid, Inc., New York, New York
Sealy Mattress Company, Des Moines, Iowa
G. D. Searle & Company, Chicago, Illinois
Security Laboratories, Burlington, Iowa
E. R. Squibb & Sons, New York, New York
Standard Chemical Company, Des Moines, Iowa
Sutliff & Case Company, Inc., Peoria, Illinois
Ulmer Pharmacal Company, Minneapolis, Minnesota
United Medical Equipment Company, Kansas City, Missouri
The Upjohn Company, Kalamazoo, Michigan
U. S. Vitamin Corporation, New York, New York
Winthrop-Stearns, Inc., New York, New York

President's Page

In May, I met with the chairmen of the Judicial Council and the Board of Trustees to discuss the possibility of coordinating the meetings of the Executive Council with the meetings of the two groups that they head. We discussed the advisability of having the three bodies convene on the same day, but at different hours.

A schedule of meetings that we put together at that time was subsequently approved at meetings of the Judicial Council and Board of Trustees. Though all of the dates are tentative and subject to change, it is as follows:

July 21	All three groups
Sept. 15	All three groups
Oct. 20	Board of Trustees and Judicial Council
Nov. 17	All three groups
Dec. 15	Board of Trustees and Judicial Council
Jan. 19	Board of Trustees and Judicial Council
Feb. 16	All three groups
Mar. 15	Board of Trustees and Judicial Council

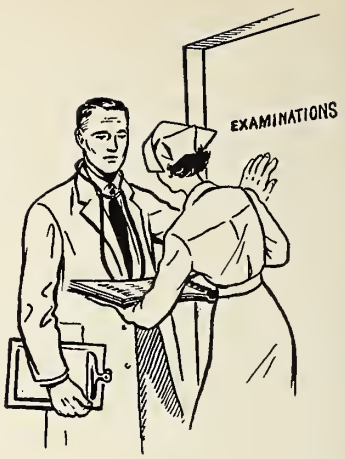
We believe there is real value in having these groups meet together as often as possible so that all doctors on the Executive Council can be well informed on the problems and activities of the Society. It is especially important that the delegates to the AMA have such opportunities, for they do not attend meetings of the Judicial Council or Board of Trustees except on special invitation, and they have few opportunities for keeping posted on the work of those two groups other than those provided by the minutes and other materials that are sent them from the Society's office.

This plan should help keep the medical profession in Iowa not only well informed but united.

L. R. Offner, M.D.

President

THE DOCTOR'S BUSINESS



Control Your Expenses

MILLARD K. MILLS

WATERLOO

Although maintaining an adequate income certainly is of primary importance, it is not the only part of your financial program that is deserving of careful attention. Having established the most effective procedures for collecting the money due you, you should next plan the prudent spending of that money.

A certain portion of your income is immediately paid out in meeting business expenses. There is not a great deal the doctor can do toward controlling many of his disbursements, but nevertheless he should watch them closely for several reasons.

It is important that you know what portion of your monthly income is spent to produce your income. Divide your total business expenses by your total cash receipts. Your answer, expressed as a percentage, is what commonly is referred to as the "overhead."

The relationship of your overhead to your financial program can readily be seen in the following illustration. A hard-working doctor earned $60,000 gross income in one year, but his overhead ran between 50 and 60 per cent, and thus he had a net profit of only $27,000. Another physician earned $45,000, but by keeping his overhead down to 35 per cent had a net of $29,250 for the same period.

Except for the idealists who work primarily for a cause, no man wants to put forth tremendous effort without realizing a just return for it. The average physician's overhead should run between 35 and 40 per cent. Of course certain conditions may justify changing those figures a bit, one way or the other, but they should never be appreciably higher in any practice.

If your overhead is too high, it may be that you are paying out too much, but it may also be that

(1) Your volume is too low,
(2) Your fees are inadequate,
(3) Your collections are poor.

TROUBLE IN THE DISPENSARY?

One item that you should watch very carefully is your drug expense. Many doctors are losing money by dispensing. Some of them are reluctant to charge the full office-call fee for a visit at which medication has been given, and thus they bill the patient for less than the amount of which they are entitled. Others make an inadequate mark-up on their drugs. A recent survey showed a 300 per cent variance in the prices that different doctors charged for the same drugs. Physicians that have a collection problem frequently discover that they are losing fees not only for services but also for drugs. Finally, unless your drug supply is inventoried regularly and a close watch is kept on your orders, you may lose money through obsolescence.

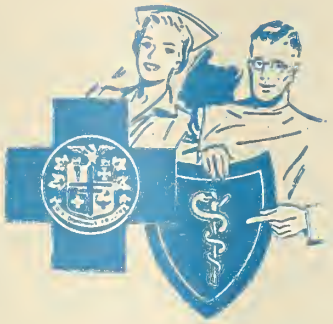
SALARIES

The second variable expense to be considered is the salaries that you pay. Remember, you can't pay too much for a *good* girl, but whatever you pay for a *poor* assistant is too much.

Your salary expense is a guide to the efficiency of your office. If it is out of line, it may warn you that your assistants are not producing as they should. If it is too low, perhaps you should consider giving your assistant a raise to be sure she is adequately paid for her services. Generally salary expense runs between 10 and 12 per cent of cash receipts.

Give careful study to your expenses. Thus you can have prompt warning when it has become necessary for you to increase the efficiency of your operation. Your expenses are a vital factor in the plans you have made for yourself and your family.

BLUE CROSS



BLUE SHIELD

AMA Proposes Study Groups

Actions of the House of Delegates with reference to Blue Shield were published in this section last month. Those actions will serve as a guide for the policy making officials of Iowa's Blue Shield Plan.

Every doctor in Iowa, and particularly each Blue Shield Participating Physician, should give much constructive thought to the improvement of Blue Shield in the months ahead. Blue Shield is the doctors' plan and therefore needs the guidance of sound constructive thought on the part of the medical profession, to make it the best means for people to prepay their future surgical and medical expenses.

There are many encroachments upon the free practice of medicine by both public and private forces. If doctors are to combat these forces successfully, they must unify their thoughts and energies toward improving the means of financing health care, and come up with satisfactory answers which the public will select in preference to all others.

It is suggested that study committees be created at the county medical society level to view all of the socio-economic forces affecting the practice of medicine. Each county medical society was urged at the AMA Meeting to schedule at least one, and preferably two, society meetings devoted specifically to medical economics.

Blue Shield is the best public relations tool available to the medical profession. Free discussion of this method of financing medical care by study groups and county medical societies will result in the development of the most progressive and realistic means of helping people meet this problem.

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

CORNELL CONFERENCES ON THERAPY, Volume VII, ed. by *Harry Gold,* M.D. (New York, The Macmillan Company, 1955. $4.50).

PERINATAL MORTALITY IN NEW YORK CITY: RESPONSIBLE FACTORS, by *Schulyer G. Kohl,* M.D. (Cambridge, Mass., Harvard University Press, 1955. $2.50).

OBSTETRICS, by *J. P. Greenhill,* M.D., 11th Edition. (Philadelphia, W. B. Saunders Company, 1955. $14.00).

BEDSIDE DIAGNOSIS, by *Charles Seward,* M.D., F.R.C.P., 3rd Edition. (Edinburgh and London, E. & S. Livingstone, Ltd., Baltimore, The Williams & Wilkins Company, 1955. $4.00).

HANDBOOK OF PEDIATRICS, by *Henry K. Silver,* M.D., *C. Henry Kempe,* M.D., and *Henry* B. *Bruyn,* M.D. (Los Altos, Calif., Lange Medical Publications, 1955. $3.00).

BOOK REVIEWS

KINESIOLOGY OF THE HUMAN BODY Under Normal and Pathological Conditions, by *Arthur Steindler,* M.D. (Springfield, Illinois, Charles C Thomas, Publisher, 1955. $19.75).

Here, indeed, is an unusual masterpiece. Combined in one volume, we find the clinical application of kinetics under both normal and abnormal conditions. This represents the life work of a master surgeon, recounting his own experiences and observations and substantiating them by the precise application of mathematical calculations.

The value of this textbook lies in its orderly presentation of the basic elements of locomotion, not only as found in the normal individual, but also correlated with the changes brought about by congenital variations and the ravages of disease upon joint function. The physician and student will find Dr. Steindler's research an indispensable background for the prevention, treatment and rehabilitation of locomotor disorders, quite as he intended it should.

This reviewer should be joined by a host of other readers in discovering the wealth of data presented. Each chapter is summarized to bring out the important facts, and an adequate bibliography is included. The type is easy to read, and the illustrations are excellent. Dr. Steindler is to be congratulated for this fine book.—*Everett M. George,* M.D.

POMP AND PESTILENCE, by *Roland Hare,* M.D. (New York, The Philosophical Library, Inc., 1955. $5.75).

The reviewer was greatly impressed with the official story of what happened to one of Japan's outstanding divisions in its attempt to conquer the Owen Stanley Mountains during World War II. Of some 20,000 men, only 6 soldiers completed the conquest. What happened to the remainder is a striking example brought out by the author. Professor Hare follows the role of pestilence as related to the history of mankind. Students of medicine will be much interested in the well documented account that the author gives.—*Everett M. George,* M.D.

REACTIONS WITH DRUG THERAPY, by *Harry L. Alexander,* M.D. (Philadelphia, W. B. Saunders Co., 1955. $7.50).

Dr. Alexander has written this new book in order to bring into relief a subject which is becoming increasingly important to doctors everywhere (see editorial in this issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY). He is particularly qualified to write a book of this sort because of his tremendous experience in the field of allergy, hypersensitivity and internal medicine. And, as is indicated by the fact that he writes this volume as "Emeritus Professor," he has watched various drugs appear and disappear during a professional career of 40 years or more.

The first few chapters of the book are devoted to general topics: Mechanisms, Dermatologic Manifestations, and Systemic Patterns, of reactions to drug therapy. The remainder of the chapters deal with specific classifications of drugs. In these latter, the types of reactions and their treatment are discussed briefly. The subject matter is boldly divided by means of subheadings and Italics so that it may be easy to read. Many illustrations are included, as well as extensive bibliographies following individual chapters.

The entire book is rather short, is easy to read, and is suitable for doctors' offices and reference libraries. The reviewer was extremely well pleased with the effort, his only criticism being that the presentation of chemical facts and theories could well have been dilated upon. All in all, however, it is a book which can be highly recommended.—*Daniel A. Glomset,* M.D.

THE YEAR BOOK OF ENDOCRINOLOGY (1954-1955 Year Book Series), ed. by *Gilbert S. Gordan,* M.D. (Chicago, The Year Book Publishers, Inc., 1955, $6.00).

Every year the literature of endocrine disorders becomes more massive and complex. In few other specialties does a practicing physician so desperately need a filter to separate the important articles from those of less immediate clinical value. The Year Book serves this purpose, with its careful selection of data to abstract. It is set up in an orderly fashion, treating first the pituitary and then, in descending pattern, the other organs of internal secretion.

One cannot become an endocrinologist by reading this Year Book, but if he does have a background in the subject, a few evenings spent reviewing these abstracts can be quite refreshing. It is highly recommended to anyone who may be called upon to be a diagnostician. In therapy, too, progress is so rapid that one needs this sort of aid to help him sort out the confusion in his mind.—*A. G. Lueck,* M.D.

(Additional Book Reviews on page 353)

MENTAL ILLNESS

PARANOID STATES

Of all mental illnesses, the paranoid states are probably hardest for both laymen and physicians to recognize. In large part, the difficulty is due to the lack of bizarre behavior in many who suffer from this particular kind of aberration. The word *paranoia* itself gives a hint of the nature of the difficulty, for it comes from the Greek roots *noia,* meaning "knowledge," and *para,* which means "beside" or "along the side." In other words, the term originally designated peculiar ideas, phenomena which are one of the characteristics of the disorder for which it is now the name. The patient organizes his peculiar ideas and creates from them a unique system of knowledge. We call his ideas delusional, for they differ markedly from what is commonly accepted. However, the person suffering from this particular difficulty is often more determined to adhere to his beliefs than is even the most ardent cultist whom we are likely to consider healthy.

The reason for the difficulty in changing the patient's ideas is that they seem to serve him as an efficient defensive and protective device, developed to shield him from the hurts of the world.

One rather quickly finds that most paranoid individuals are extremely sensitive—one could even say hypersensitive—so that early in their lives they have learned that "offense is the best defense." In psychological terms, we call this mental process "projection," meaning that the person is able to believe that others are responsible for his difficulties, and that others are to blame for his having made mistakes. Projection occurs in healthy people, but it is carried to a pathologic extreme in those who suffer from paranoid illnesses.

The adjective *paranoid* is used to describe thinking similar to the delusional formulations of paranoiacs which may occur in connection with schizophrenia, depressions, toxic states and other mental disease.

It is often said that the "true paranoiac" rarely is confined in mental hospitals because once his original premise is granted, the rest of his thinking is quite logical. To a certain extent that is true. One can quickly see that much the same sort of thing is to be found in people who hold certain strange religious and political beliefs and certain nationalistic and other attitudes. However, as soon as the reasoning that supports a patient's original contention begins to break down, we find it comparatively easy to recognize his disorder. Such persons become involved with the law because of their tendency to institute legal suits, to blame, to enlarge upon faults and to make accusations. When paranoia is coupled with schizophrenia, with feeling badly impaired, is becomes one of our more serious and sometimes dangerous disorders.

In some, one can carry on treatment by winning confidence and trust, so that the patients need not resort to their habitual tendency to project. In others, one can more effectively treat the basic disorder that gives rise to the delusional misrepresentations secondarily. Many individuals who suffer from this distortion of thinking are useful citizens and can be given enough insight so that they conduct themselves in such a way as not to reveal their disturbing ideas. This course of action is often difficult for the patient, but it becomes easier as he is accepted by a group of people who consider his aberration unique and individual, and do not make an issue of it.

We need to keep in mind that the term *paranoid* is used to describe states which vary all the way from that of the normal-behaving paranoiac to that of the most disorganized paranoid schizophrenic. For that reason, it is always important to qualify the term when we use it, and to distinguish the meaning of the adjective *paranoid* from the meaning of the nouns *paranoia* and *paranoiac.*

INDUSTRIAL MEDICINE COURSE

A full-time, eight-week comprehensive course in industrial medicine for physicians will begin at the Bellvue Medical Center of the New York University Postgraduate Medical School on Monday, September 26.

Among the subjects that will be covered are: organization, administration and economics of an industrial medical department; clinical aspects of occupational diseases; industrial injuries and the elements of safety programs; toxicology and industrial hygiene. Opportunities will be given for attendance at medical, surgical and pathologic conferences.

Applications should be addressed to the Dean. Tuition is $250.

WYETH OFFERS STREPTOCOCCI FILM

The closed-circuit television program presented in hotels at Des Moines and Omaha during March by Wyeth Laboratories under the sponsorship of the American Academy of General Practice was kinescoped, and is now being lent to county medical societies and other professional groups as a 16 mm. moving-picture film. The subject is "Management of Streptococcal Infection and Its Complications."

Requests, containing the name of the group that the applicant represents and three choices of dates, may be sent to Wyeth, 1401 Walnut Street, Philadelphia 2, Pennsylvania. There is no charge.

Iowa Academy of General Practice

ANNUAL SESSION

The Annual Scientific Assembly of the Iowa Academy of General Practice will be held in Des Moines on September 15 and 16, at the Hotel Savery. An excellent program is being assembled, and it will be announced in full in the August JOURNAL. Friends of the Academy, as well as members, are encouraged to attend these sessions. All plans and reservations should be made now.

SOME REMINDERS

There is no doubt that the doctor deserves more consideration than he is getting. The tendency these days is for laymen, and occasionally for other physicians, to talk of him, of his patients, and of his patient relationships and problems with little thought for his personal plight. Naturally, it is supposed that he is able and is taking pains to look out for himself, but such is by no means always the case. To remedy the situation, each of us should make periodic self-assessments to make sure that he is both protecting his own interests and remembering the Golden Rule.

Community life is important to each individual, and what it means to the doctor depends entirely upon his individual effort. It is true that he cannot enter into all activities. He cannot join all clubs, be on all committees and be active in all enterprises. He will be forced to refuse many times, but let him do so without offending. Community projects in which he is to participate should be picked with education, religion and social affairs as a basis. In these he should contribute his active best, for by doing so he will find a type of relaxation different from that which can be found in any other place.

The doctor-doctor relationship is vital. The tendency is for us to criticize fellow practitioners for their shortcomings, rather than to give constructive help. There are many points which mean much. Because a friendly attitude in itself creates good feeling, we should make an effort to speak to all we meet. When a patient has been referred to a specialist, the referring doctor should receive a report. But remember that in order to deserve such a report, each of us must see to it that a letter to the consultant has accompanied the patient, so that the specialist may know what is expected of him. Again, it is important for us to read all mail arriving from our medical organizations, from insurance companies and from other doctors. Often the doctor's secretary, if she is uninstructed, will throw these communications into the wastebasket. But she will look for this correspondence if she has been told to do so. Answer these communications at once. Some men seem never to answer a letter, no matter how important.

Recently, in response to a questionnaire sent to over 400 members of a statewide organization, only 153 replies were received. That unsatisfactory response demonstrated individual carelessness.

Finally, we should try to remember only the good things done by individuals and medical organizations. Try to forget the errors and shortcomings. But whether or not one remembers failures and mistakes, one should make it a rule to keep still if he cannot say something good about a colleague. Let us say favorable things, rather than unfavorable ones.

The doctor himself is very important to his own success and happiness. His health is important. He should have a family physician, he should go to him regularly for a complete physical checkup, and then he should follow his advice and instructions quite as an ordinary patient is expected to do. The doctor's vacations should be properly spaced and planned. This planning needs to be done at least four months ahead, and the recreation should be of a type that is relaxing and really enjoyable.

The doctor's wife and children are important, too. Though it is true that patients interfere with his plans for evenings together with his family, the doctor shouldn't forego any opportunities for such rest and companionship. Spending some time in that way is essential to his physical and mental well being.

True, the physician—and particularly the family physician—is important to the community, to himself and to his family, but he will be rewarded in proportion to his individual efforts. These precautions are highly important to his own personal life, and will enable him to fulfill his ambitions properly.

BETTER EDUCATION IN MEDICAL ETHICS

As recently as 1940 malpractice suits were rare except for cases of flagrant violations of good practice. Recent surveys have disclosed that a substantial percentage of malpractice claims can be credited to the physician's conduct and behavior. Should we not, then, in the light of recent experience, reevaluate the areas of emphasis in the ethical and legal curricula of our medical schools?

It is a matter of record that interns and residents, by their remarks concerning the private physician's care of a patient, have caused malpractice actions against the doctor. These neophyte physicians are frequently unfamiliar with the social, economic and emotional background of the patient—all of which are of the utmost concern to the family physician. He recognizes those factors, and such recognition may for good reason delay the carrying out of certain medically desirable procedures. The intern or resident, not having complete responsibility for the patient, without consultation or permission from the doctor and unaware of these restraining elements, asks the patient why certain procedures were not done, or why a certain type of treatment wasn't pursued. Such questioning may provoke thoughts that poor or substandard treatment has been given. For a long time physicians have known that their severest critics have been among the hospital resident staff, and that the most difficult examination to pass was the "Intern and Resident Board."

Failure to clarify and explain the interphysician relationship may have brought about the unfounded charge that it is impossible to get one physician to give an honest opinion about another doctor's conduct and treatment of a case.

Although medical education has many problems, it is suggested that possibly the curriculum could be more impressively attained by audio-visual aids demonstrating to the student what apparently simple things bring about law suits. In the reorientation of this aspect of the curriculum the legal importance of the medical record should be stressed as well as its scientific importance. For instance, a doctor should never fail to record a patient's reason for refusing to have an X-ray examination or consultation, or for not following certain procedures to confirm or exclude the presence of any entity or disease. Likewise, the importance of not wandering into the fields of experimental procedures or treatment should be pointed out. There are many other examples which confront the physician in private practice which, if he does not record the reasons for the patient's action, may place him in jeopardy in the future.

In asking our educators to reëvaluate their socioeconomic, ethical and medical jurisprudence courses, the appeal is not for more hours, but rather for reëmphasis and a change to a possibly more effective method of conveying these important thoughts.

—From an editorial by Alfred A. J. Den, M.D., in MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, May, 1955.

WHY PATIENTS DON'T PAY

To determine the cause of physician-patient difficulties, the Alameda County Medical Society and the California Medical Association recently conducted a four-month survey covering 1,500 patients whose accounts were delinquent. Analysis of reasons for non-payment, as published in GP, showed the following:

Adjustable economic difficulties—19 per cent. These people proved to be undergoing financial hardships when approached by the Bureau. Most involved temporary emergencies.

Poor business methods in the doctor's office—30.23 per cent. This included no billing; insufficient information to trace "skips"; statements not itemized; no collection follow-up in the doctor's office.

Dissatisfaction with medical services—3.4 per cent. The Bureau found that one-third of this group had justifiable complaints.

Responsibility for bill disputed—2.04 per cent. Patients pointed fingers at a divorced husband, a parent, insurance company and others. The Bureau agreed with about a third of them and collected the bill from the proper individual or company.

Excessive fee—2 per cent.

Patient not informed—21 per cent. This involved the failure of the doctor to make clear financial arrangements with the patient before treatment or rendering the bill. The patient, in some cases, was not informed of laboratory, X-ray and other costs.

Negligent (slow pay)—9.61 per cent.

Personality clashes—.86 per cent. Anger directed at a doctor or nurse on a personal level.

Deadbeats—10.99 per cent.

It is reemphasized that the above figures represent *delinquent accounts only,* and do not represent the doctors' total practice.

When steps were taken to correct the above difficulties, collections increased as much as 25 per cent. What is more important, patient satisfaction increased proportionately.

—MEAD DIGEST, May, 1955, p.5

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

IOWA MORTALITY 1953-1954

Recently tabulated data on mortality among Iowa residents as prepared by the Division of Vital Statistics indicate a drop in the Iowa death rate from 10.2 deaths per 1,000 estimated population in 1953, to 9.7 deaths per 1,000 estimated population in 1954. In view of the aging of Iowa's inhabitants, this drop is worthy of investigation and comment.

From a historical standpoint, the last year in which the total *number* of deaths was less than in 1954 (25,602) was in 1946, when the total reported deaths were 25,408. The death rate for that year was 9.8 deaths per 1,000 estimated population. In comparing the two years 1953 and 1954, one finds a total drop from 26,715 in 1953 to 25,602 in 1954 amounting to 1,113, or 4.2 per cent. The following table serves to point out some of the major areas in which these drops occurred.

DEATHS AMONG IOWA RESIDENTS

1953-1954

	1953	*1954*	*Decrease*	*Per Cent Decrease*
All Causes	26,715	25,602	1,113	4.2
All Infectious and Parasitic Diseases	347	339	8	2.3
Malignant Neoplasms	4,200	4,180	20	0.5
Diabetes Mellitus	433	400	33	7.6
Vascular Lesions Affecting Central Nervous System	3,899	3,706	193	4.9
Diseases of the Heart	9,861	9,513	348	3.5
Arteriosclerosis (General)	704	701	3	0.4
Influenza and Pneumonia	974	630	344	35.3
All Accidents	1,645	1,641	4	0.2
All Other Causes	4,652	4,492	160	3.4

Losses shown in deaths from infectious and parasitic diseases, malignant neoplasms, arteriosclerosis and accidents are minor and do not contribute greatly to the total decrease of 4.2 per cent. But in recent years there have been several organized state-wide efforts to reduce fatalities occurring as a result of diabetes mellitus, and those efforts apparently are now bringing results, since there was a decrease of 7.6 per cent from 1953 to 1954. This may, in effect, help to point out the importance of continuing programs in health education and need for unremitting preventive efforts by the medical profession pointed towards a specific disease or group of diseases.

A substantial decrease in deaths resulting from vascular lesions affecting the central nervous system may be partially the result of the changing methods of treatment and the recent medical discoveries which benefit individuals suffering from symptoms aligning themselves with these difficulties.

NO GROUNDS FOR COMPLACENCY

Nine hundred seventy-four Iowans died as a result of influenza and pneumonia in 1953. Numerous published reports during late 1953 and early 1954 indicated an epidemic condition among the older groups in the state in the early months of 1953. Therefore, although the decrease to 630 deaths in 1954 is a phenomenal one, the difference seems to be in the epidemic condition in early 1953. Medical authorities in the state seem to feel that there is no successful method of prediction which will enable them to say when the influenza virus will be present or how it can be controlled. The changing habits with regard to the practice of medicine, when many illnesses of this nature are "treated" by telephone, undoubtedly has some relation to the prevalence of the disease and the resulting deaths.

The other large substantial decrease in number of deaths occurred in the group of deaths known as diseases of the heart. Although some authorities have related the heart deaths to influenza and pneumonia deaths, a more likely consideration, despite the fact that it too is unsupported by statistical evidence, would be that the changing concept of treatment for sufferers of heart disease together with improved drugs and new surgical procedures has helped to bring down the number of heart deaths. In considering comparative data on deaths among Iowa residents from one year to the next, it is important that one recognize the value as well as the shortcomings of statistics and statistical procedures. Statisticians may set out incorrect population bases for arriving at death rates—i.e., they may make mistakes in interpretation—but there is certainly also room for consideration of error on the part of the physician in attendance insofar as the diagnosis of the cause of death is concerned. By and large, the chance errors in all instances tend to eliminate themselves as the total number of persons considered increases. Therefore, though

the decrease in number of deaths appears to be large, it should not be thought to justify any relaxation in the organized efforts of public health workers, organized voluntary health agencies and organized medical and scientific efforts to reduce disease in the state. In only a few instances have we reached the point where it is no longer necessary to convince the citizens of Iowa that a specific disease or a group of diseases threatens the health of the communities in which we live.

MORBIDITY REPORT

Disease	*1955 May*	*1955 Apr.*	*1954 May*	*Most cases reported from these counties:*
Diphtheria ...	1	0	0	Woodbury 1
Scarlet Fever	50	142	177	Clay, Des Moines, Polk
Typhoid Fever	2	2	1	Polk, Scott, one each
Smallpox	0	0	0	.....
Measles	1018	2240	3520	Des Moines, Plymouth, Scott
Whooping Cough	94	160	28	Polk, Scott, Webster
Brucellosis ...	22	28	26	Montgomery 2, others scattered 1 to a county
Chickenpox ..	241	679	918	Boone, Buena Vista, Pottawattamie, Scott
Meningococcus Meningitis .	3	1	6	Grundy, Linn, Winneshiek, 1 each
Mumps	645	1039	1396	Clinton, Dubuque, Grundy, Story
Poliomyelitis .	16	9	6	Johnson 2, Sac 2, Wapello 2, Woodbury 2, others scattered 1 to a county
Infectious Hepatitis ...	102	102	527	Black Hawk, Linn, Polk, Scott
Rabies in Animals	18	44	47	Guthrie 2, Woodbury 2, others scattered 1 to a county
Malaria	1	-	-	Lee (no history of travel outside of Iowa)
Psittacosis	2	-	-	Clinton 1, Wapello 1
Q Fever	1	-	-	Cedar
Tuberculosis ..	33	51	102	For the State
Syphilis	98	120	165	For the State
Gonorrhea	44	39	74	For the State

BOOK REVIEWS

(Additional Book Reviews on page 348)

Bickham-Callander Surgery of the Alimentary Tract, Volumes I, II and III, edited and enlarged by *Richard T. Shackelford,* M.D., assisted by *Hammond J. Dugan,* M.D. (Philadelphia, W. B. Saunders Company, 1955. $60.00).

Between my sophomore and junior years in medical school, I learned to tie "one-handed knots" by closely following the text of Bickham's operative surgery. I have long since learned that real surgery is not exemplified by a flashy "one-handed knot," but have always kept a warm spot in my heart for the old Bickham work, none the less. As time progressed, the text was partially revised by Callander, and now it has been completed by Dr. Shackelford, of Johns Hopkins University School of Medicine.

The surgery of the alimentary tract begins with the pharynx and ends with the anus. The three-volume work beyond doubt furnishes the most exhaustive survey of surgery of the esophagus, stomach and intestinal and biliary tract that has so far been produced. The text is also overwhelming, and the thousands of illustrations give a complete step-by-step analysis of every relative surgical procedure, whether modern or archaic.

In spite of my long standing fondness for the Bickham work, I shall venture one criticism of this version: that it contains too much of Bickham and not enough of Shackelford. That is to say, many of the operative procedures described in great detail are now of no more than historic interest, for they went out of date at about the time that high-button shoes were relegated to the attic, or even earlier. It is of course true that the real student of the subject can profit from the historical review that it facilitates, and no one is in danger of becoming confused as a result of the juxtaposition of current and obsolete methods, for Dr. Shackelford has been careful to give his personal evaluation of the majority of these operative procedures. In that respect, no more up-to-date surgical treatise could be desired. Perhaps the retention of outmoded operative procedures lends a little of the scent of Grandmother's lavender to the more or less ascetic dogmatism of modern day surgery.

These three volumes, complete in every respect, are heartily recommended to the real surgical student and should be a part of the library of every growing surgeon. Perhaps they should be urged as a gift possibility for that hard-to-shop-for surgical resident.—*Tom D. Throckmorton,* M.D.

The Year Book of Pediatrics (1954-1955 Year Book Series), ed. by *Sidney S. Gellis,* M.D. (Chicago, The Year Book Publishers, Inc., 1954. $6.00).

Again the Year Book of Pediatrics contains a fine review of the literature, this time for the period from June, 1953, to May, 1954. The abstracts are well written, and the editorial comments add greatly to the value of the publication. The editor calls upon a number of individuals to comment on various articles, with the result that in many instances we are able to learn both the pro and the con on controversial subjects. The 1954-1955 volume, under the editorship of Dr. Gellis, continues the fine traditions of this publication.—*M. E. Alberts,* M.D.

The Year Book of Obstetrics and Gynecology (1954-1955 Year Book Series), ed. by *J. P. Greenhill,* M.D. (Chicago, The Year Book Publishers, Inc., 1954. $6.00).

This always valuable summary of the current literature in obstetrics and gynecology is as usual very compactly arranged. The book includes abstracts from all the literature in the field from July, 1953, to July, 1954.

The summaries of articles are sufficiently complete to give one a knowledge of all of the authors' important points, and following each of the articles of special importance, there are discussions by the editor, Dr. Greenhill.

The book is divided into two sections, one devoted to obstetrics and the other to gynecology, and the subheadings encompass the entire scope of both subjects. A book such as this affords an excellent opportunity for the physician to get a quick review of all current thinking by writers in this specialty, and is thus of considerable value both to specialists and to general practitioners.—*Parker K. Hughes,* M.D.

WOMAN'S AUXILIARY NEWS

Mrs. Edw. B. Hoeven, *Woman's Editor*
224 East AltaVista, Ottumwa

Mrs. Wilson Wolfe, *Asst. Woman's Editor*
N.E. Elm Street, Ottumwa

LETTER FROM THE PRESIDENT

To the Polk County Medical Auxiliary, we are all grateful for the planning and executing of a very fine state meeting, the memory of which I shall cherish. The beautiful installation of officers, conducted by Mrs. C. R. Pearson, national chairman of Nurse Recruitment, was inspirational, and the vows taken by your officers are ones they will fulfill to the best of their abilities.

In every community, we often hear the comment, "We are overly organized." That is true, but the doctor's wife certainly should draw the line after, rather than before, she joins her county Auxiliary. She needs to participate in numerous community activities because her position demands it and because it is good for medical public relations. One of the principal ways in which she can do so is through the work of that organization.

As I have read the records of our state Auxiliary, I have seen that it has grown from 462 members in 1947 and 1948, to 1,042 members at the last report in April, 1955. It is a privilege for us to belong to the Auxiliary, and we owe it our allegiance. Some 600 women in the past seven years have felt it worthwhile to join, and we hope many more will come to that conclusion before this year is through.

Our summer holidays are here, and I wish for each of you and the members of your families a wonderful and restful summer, be it at the mountains, the seashore, the lakes or just at home. But as you rest and renew your energies and enthusiasm, I should like you to think about your fall Auxiliary program plans.

Set the date for your fall district meetings early, so that if you wish your president and her associates to attend any of your meetings, they can plan their itinerary for the fall and winter months. We are anxious to serve you.

If possible, plan your county programs for the entire year. Some county Auxiliaries have their own yearbooks printed, and you may wish to follow their lead.

Entertain the Future Nurses Club of your high school at a tea during National Nurse Week, and plan an interesting program for those girls. For ideas, consult the state chairman, Mrs. E. A. Larsen, of Centerville.

Plan some dance, benefit bridge party or other event to raise money for the American Medical Education Foundation. Remember the memorial cards and plaques for physicians' families.

Resolve to help our state TODAY'S HEALTH chairman, Mrs. Ralph Moe, in her efforts to make Iowa 100 per cent in subscriptions. We almost achieved that goal in 1955.

Be planning how your county will honor its doctors on "Doctor's Day," March 30. Stress the point with your hometown newspaper editors that it is *Medical Doctor's Day.* Some of them, I fear, know not the line of distinction.

Begin collecting materials from your members to send a box from your county to the Handicapped Committee. It can contain knitting yarn, sewing material remnants, felt hats, belts, buttons, needlepoint yarns, etc.

Consider your next county election. Hold it, and collect your dues, during the first week in March, to facilitate the work of your state treasurer in her report to national.

Our Courtesy Chairman should receive notifications of all prolonged illnesses and deaths, so that she can send notes of sympathy from our organization to the families. Address Mrs. A. O. Wirsig, 704 West Street, Shenandoah.

Remember to invite the new doctor's wife in your community to visit your meetings, and encourage her to join your group. There will be many new physicians locating throughout the state during the summer months, and if one or more of them settles in your community, I hope you and your husband will take time to make evening calls on them and their wives, so that you can extend them your friendship and welcome them to your town.

Let us begin renewing friendship among our own professional groups and seek for better social relationships this next year. With a common interest, our Auxiliary cannot help growing.

I leave you with this little poem:

THREE WISHES

I wish you joy in the morning
That comes when the long night ends.

I wish you cheer in the noonday
With the thought of a host of friends.

And when the shadows of evening
Come stealing along the way,

I wish you the heart's contentment
At the end of a Happy Day.

—Marion D. Bassett

Esther F. Flynn
President

TRIBUTE TO MRS. CHAPLER

In recognition of her 13 years of consistent service as Publications Chairman, the members of the state Auxiliary presented Mrs. K. M. Chapler a gift of silver at the Annual Meeting. And on that occasion, Mrs. Howard Smith gave the following résumé of Mrs. Chapler's accomplishments:

"As Dr. Caughlan just stated, 'The prime objective of the medical profession is service to humanity.' Mrs. Keith Chapler, a doctor's wife, truly exemplifies that objective in her everyday life. She is a positive force in her home community, where her activities reflect the best in public relations.

"For many years, she has taught a Sunday school class of teenagers (At present it numbers 40 students); she is church organist; she visits the Dexter Nursing Home each week, bringing cheer to the lives of the patients; she is an active club woman; she helped to establish one of the finest libraries in Dexter; and she is well known for her book reviews.

"Mrs. Chapler is also a poet, having published in 1937 a book of poems entitled GROWING HERITAGE.

"For the past 13 years, she has edited the AUXILIARY NEWS, which is published each month in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. Reprints of each issue are mailed to each member of the Auxiliary in Iowa and to state officers in many other states."

YEAR'S END

The books for another year of Auxiliary work are being tidied, and last minute comments are being added as each chairman prepares them for her successor or plans to start a new year with new ideas, as the case may be.

As your organization chairman, I have quite a large book. Iowa has 99 counties, and for Auxiliary business they are divided into 11 districts. I have tried to list each member correctly in her own county, which, in turn, has been placed under its proper district.

Those of you who missed the convention missed an extremely interesting and busy time, with much fun and laughter. The Annual Report books passed out at that time contained very informative and interesting reports of your community activities in Auxiliary work. If you did not receive one, write for your copy to Mrs. Hazel Lammey, our administrative secretary, in Des Moines.

As I look back over the year, my hindsight becomes very good. There is much that I might have done, but failed to do. Much of the work I did could stand improvement. I shall pass the record of both my success and failure along to our new organization chairman so that our Auxiliary may profit somewhat from my experiences.

The reward for my many miles of traveling in the state this past year has been more than enough for me—the privilege of being a guest in your homes, in your home towns and at your meetings, and an education in the geography of Iowa.

"Why a Woman's Auxiliary?" The many new friendships I have formed, and an awareness of your willingness to help with our work in promoting health education in Iowa have provided me an answer to that question. Your enthusiasm has remained with me throughout the year and has been my incentive.

We aimed high last year: an Auxiliary member in every county and no red dots on our map. We didn't quite reach that goal, but we are on our way. Districts III and VIII have no red dots.

My heartfelt thanks to the eleven councilors who worked so hard to give us wonderful district meetings. My thanks to all officers and, indeed, to all members in the state. You individually are the Auxiliary, and your officers are merely the instruments of your will. I wish to acknowledge the tremendous energy of our immediate past president, Mrs. Lester Hegg. Her many personal contacts have planted the seeds that have aided me in helping our Auxiliary grow in membership. Mrs. Flynn, our new president, was ever ready to help me, and was at my side at meetings, advising and assisting me. It is a privilege to work with those women.

As your new president-elect, I wish for all of you a rewarding year's work in our Auxiliary and success in your projects. I appreciate your confidence in me and I am more than willing to help any of you in any way I can. I shall constantly endeavor to deserve your trust and confidence.

Mrs. Dean H. King
President-elect

COUNTY AUXILIARIES

Dallas-Guthrie

The Dallas-Guthrie Auxiliary and the members of the Medical Society met for dinner at the Mill Inn, in Redfield, on May 20. At the Auxiliary session 12 members were present.

A memorial was given in memory of a deceased member; the TODAY'S HEALTH chairman reported 46 subscriptions, or 207 per cent; and convention reports were given by the delegates. Dr. Wildberger showed colored slides of the polio vaccination clinic.

Mahaska

The Mahaska County Woman's Auxiliary met in the private dining room of the Downing Hotel, Oskaloosa, on May 17, with seven members pres-

ent. Mrs. Atkinson reported on the Annual Meeting held in Des Moines, and the following committee chairmen were appointed: Mrs. Carroll Swanger, historian; Mrs. Sydney Smith, health magazines; Mrs. LeRoy Catterson, Future Nurses Club; and Mrs. Howard Bos, American Medical Education Foundation.

Page

Members of the Woman's Auxiliary to the Page County Medical Society held their May meeting at the Clarinda Country Club, where the doctors joined them for dinner. Eleven Auxiliary members were present, and Mrs. Robert Longbridge, of Omaha, was a guest. Mrs. Richard Bunting, soprano, sang several selections, accompanied by Mrs. A. O. Wirsig.

Mrs. C. H. Flynn, president of the state Auxiliary, and Mrs. Wirsig, legislative chairman and Courtesy Committee chairman at the state level, were presented with small gifts.

Wapello

The Woman's Auxiliary to the Wapello County Medical Society had an evening meeting on May 3 at the home of Mrs. Lawrence Nelson, in Ottumwa. The president, Mrs. D. O. Bovenmyer, reported on the state convention and displayed the Achievement Award that had been won by the Wapello County Auxiliary. Mrs. Charles Gray reported for the Legislative Committee, and Mrs. Ray Phelps reported on the Future Nurses Clubs and on the success of their trip to the Des Moines meeting.

Committees were appointed to assist with the tea held at the Nurses' Lounge at St. Joseph Hospital in observance of Career Day for Future Nurses.

At that tea, on May 12, 142 students and 27 mothers, in addition to the members of the Future Nurses Club, were registered. The schools represented totalled 17.

TWELVE THINGS TO REMEMBER

1. The value of time
2. The success of perseverance
3. The pleasure of working
4. The dignity of simplicity
5. The worth of character
6. The power of kindness
7. The influence of example
8. The obligation of duty
9. The wisdom of economy
10. The virtue of patience
11. The improvement of talent
12. The joy of originating.

—Marshall Field

FOOD FOR THOUGHT

"Elegance of language may not be in the power of all of us; but simplicity and straightforwardness are. Write much as you speak; speak as you think. If with your inferiors, speak no coarser than usual; if with your superiors, no finer. Be what you say; and, within the rules of prudence, say what you are."

—ALFORD

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa
Thursday at 11:15 a.m.

"HEART OF AMERICA"

July 7 ..... Coronary Disease
July 14 ..... Overweight
July 21 ..... High Blood Pressure
July 28 .....Surgery for Heart Valve Disease

WSUI—Iowa City, Iowa
Tuesday at 11:45 a.m.

"THE STORY BEHIND THE DISCOVERY"

July 5 ..... The Gangster and the Rodent
July 12 ..... The Perfect Specimen
July 19 ..... The Dog He Never Had
July 26 ..... The Cow and the Bell

TELEVISION

KCRG-TV—Cedar Rapids, Iowa
Tuesday at 6:30 p.m.

July 5 ..... Physical Examination
July 12 ..... Appendicitis
July 19 ..... Highlights of the Annual Meeting of the Iowa State Medical Society
July 26 ..... Sunshine and Skin

KGLO-TV—Mason City, Iowa
Sunday at 8:30 p.m.

July 3 .... Facts and Fallacies About Psychiatry
July 17 ..... Alcoholism
July 31 ..... Pharmacy

KTIV-TV—Sioux City, Iowa
Sunday at 3:30 p.m.

July 3..How to Take Care of Your Baby at Home
July 10 ..... Birth Injuries
July 17 ..... Highlights of the Annual Meeting of the Iowa State Medical Society
July 24 ..... Sunshine and Skin
July 31 ..... Rehabilitation

At latest report, it had not yet been decided whether the series of broadcasts over WOI-TV (Ames) should continue after June.

COUNTY SOCIETIES

MEETINGS

Clinton

Dr. John Hall, of the Mayo Clinic, was the featured speaker at a meeting of the Clinton County Medical Society on May 17. He spoke on "Malignant Diseases of the Colon."

The annual "Doctors' Picnic" was held on June 16 at the Springbrook Country Club, in DeWitt.

Dallas-Guthrie

A special dinner program was held by the Dallas-Guthrie Medical Society and its Auxiliary on May 26 to honor the Life Members of the Iowa State Medical Society in the area, and their wives. Life memberships in previous years have been granted to Dr. P. W. Beckman, of Perry; Dr. C. E. Merschon, Adel; and Dr. W. V. Thornburg, Guthrie Center. Those elected to life memberships this April included Dr. S. T. Foster, of Adel; Dr. O. J. Pennington, Dexter; and Dr. C. E. Porter, Redfield.

Des Moines

The annual picnic of the Des Moines County Medical Society was held on Wednesday, June 8, at the Crystal Lake Club, on the Illinois side of the Mississippi opposite Burlington.

Johnson

Members of the Johnson County Medical Society met for a picnic dinner on June 1 at the home of Dr. George C. Albright, in Iowa City.

Scott

During its three-day run, over 1,500 people visited the third annual Health Fair staged at Hartman's Restaurant, in Davenport late in May, by the Scott County Medical Society. Free chest X-rays numbered 1,370, blood typings totaled 750, and 300 visitors received dental X-rays.

Fair officials were particularly pleased over the enthusiasm shown by visitors for the film program on health subjects. Standing room only was reported for several sessions dealing with cancer and heart disease. In addition, the film program included "Life With Baby," "Farewell to Childhood," and sequences dealing with plastic surgery, polio, and the common cold. A doctor was present to answer questions from the audience following each showing.

Woodbury

Dr. W. C. Keettel, of the Department of Obstetrics and Gynecology at SUI, addressed the May 19 meeting of the Woodbury County Medical Society on "Newer Aspects in the Treatment of Ovarian Malignancy."

DEATHS

Dr. John Franklin Martin, 67, Franklin County coroner for more than 20 years and mayor of Latimer for more than 10, died at Lutheran Hospital, Hampton, on May 3. He had suffered a heart attack a week earlier.

Dr. Raymond Alvah Seiler, 71, died at St. Luke's Hospital, Cedar Rapids, on April 24. He had practiced at Blairstown since 1911.

Dr. George Monroe Johnson, 79, a Life Member of the Iowa State Medical Society, died on May 16, at Oberlin, Ohio, where he had been living in retirement since 1951. He practiced 43 years at Marshalltown.

Dr. Richard Allen Dobson, 72, who practiced at Sioux City for over 30 years, died in New York City on May 25, after an illness of several months. He had moved to New York City in July of last year.

Dr. Carl William Wahrer, 76, who practiced at Fort Madison during most of the decade 1910-1920, died in Placerville, California, on May 29. His brother is a physician at Marshalltown.

Dr. Gabriel Sorenson Westly, 68, who practiced medicine at Manly for more than 30 years, died at his home on June 3. He had been in failing health for some time.

Dr. Sylvester Ellsworth Hinshaw, 79, who engaged in practice at Newton from 1914 until 1940, died in a nursing home at Poway, California, on June 3. He maintained an office in Escondido until a few months ago.

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair	L. H. Ahrens, Fontanelle	A. Jay Gantz, Greenfield	A. S. Bowers, Orient
Adams	C. L. Bain, Corning	J. C. Nolan, Corning	J. C. Nolan, Corning
Allamakee	R. R. Jeffries, Waukon	D. W. Dohnalek, Waukon	D. W. Dohnalek, Waukon
Appanoose	G. L. Richey, Centerville	C. H. Mitchell, Cincinnati	E. F. Ritter, Centerville
Audubon	P. E. James, Audubon	R. L. Bartley, Audubon	L. E. Jensen, Audubon
Benton	L. W. Koontz, Vinton	N. C. Knosp, Belle Plaine	N. C. Knosp, Belle Plaine
Black Hawk	I. R. Powers, Waterloo	J. S. LePoidevin, Waterloo	C. D. Ellyson, Waterloo
Boone	G. H. Sutton, Boone	A. W. Puntenney, Boone	R. L. Wicks, Boone
Bremer	R. E. Shaw, Waverly	R. P. Hardwig, Waverly	F. R. Sparks, Waverly
Buchanan	J. F. Loeck, Independence	J. W. Barrett, Jr., Independence	P. J. Leehey, Independence
Buena Vista	P. W. Brecher, Storm Lake	T. E. Shea, Storm Lake	T. E. Shea, Storm Lake
Butler	M. D. Enna, Dumont	F. F. McKean, Allison	F. F. McKean, Allison
Calhoun	W. W. Weber, Pomeroy	R. A. Lynberg, Lake City	G. S. Rost, Lake City
Carroll	P. D. Anneberg, Carroll	J. M. Tierney, Carroll	J. R. Martin, Carroll
Cass	D. E. Wilcox, Atlantic	E. M. Juel, Atlantic	R. M. Needles, Atlantic
Cedar	H. E. O'Neal, Tipton	O. E. Kruse, Tipton	H. E. O'Neal, Tipton
Cerro Gordo	D. W. Clapsaddle, Clear Lake	R. C. Brown, Mason City	H. G. Marinos, Mason City
Cherokee	C. L. Seaman, Cherokee	H. J. Fishman, Cherokee	D. E. Koser, Cherokee
Chickasaw	P. C. Richmond, New Hampton	E. B. Becker, New Hampton	M. J. McGrane, New Hampton
Clarke	C. R. Harken, Osceola	G. I. Armitage, Osceola	G. I. Armitage, Osceola
Clay	C. C. Jones, Spencer	E. E. Munger, Spencer	C. C. Jones, Spencer
Clayton	E. G. Kettelkamp, Monona	J. D. Lyon, McGregor	P. R. V. Hommel, Elkader
Clinton	J. E. O'Donnell, Clinton	R. O. Emmons, Clinton	V. W. Petersen, Clinton
Crawford	D. N. Crabb, Denison	R. A. Huber, Charter Oak	R. M. Johnson, Denison
Dallas-Guthrie	W. A. Seidler, Jr., Jamaica	W. C. Wildberger, Perry	A. G. Felter, Van Meter W. A. Seidler, Jr., Jamaica
Davis	C. D. N. Gilfillan, Bloomfield	W. D. Haufe, Bloomfield	H. J. Gilfillan, Bloomfield
Decatur	W. N. Doss, Leon	E. E. Gamet, Lamoni	E. E. Gamet, Lamoni
Delaware	W. J. Willett, Manchester	Mary Ann Croker, Manchester	R. E. Clark, Manchester
Des Moines	R. F. Moerke, Burlington	R. A. Vercio, Burlington	J. F. Foss, Burlington
Dickinson	Dale Undem, Spirit Lake	Ruth F. Wolcott, Spirit Lake	Ruth F. Wolcott, Spirit Lake
Dubuque	A. C. Pfohl, Dubuque	J. W. Moberly, Dubuque	D. F. Ward, Dubuque
Emmet	D. E. Wolters, Estherville	C. V. Lindholm, Armstrong	E. K. Vauble, Estherville
Fayette	J. P. Gallagher, Oelwein	R. S. Jaggard, Oelwein	A. F. Grandinetti, Oelwein
Floyd	T. G. Baumann, Charles City	R. A. Fox, Charles City	E. V. Ayers, Charles City
Franklin	W. W. Taylor, Sheffield	A. P. Smith, Hampton	W. L. Randall, Hampton
Fremont		A. R. Wanamaker, Hamburg	A. R. Wanamaker, Hamburg
Greene	W. E. Chase, Rippey	J. I. Limburg, Jr., Jefferson	E. D. Thompson, Jefferson
Grundy	W. K. Kienzle, Wellsburg	L. E. Frink, Reinbeck	E. A. Reedholm, Grundy Center
Hamilton	J. L. Ptacek, Webster City	D. C. Anderson, Stanhope	W. B. McGahey, Webster City
Hancock-Winnebago	A. H. Dulmes, Klemme	J. T. Enggas, Britt	T. J. Irish, Forest City
Hardin	G. M. Edvenson, Iowa Falls	F. N. Cole, Iowa Falls	L. F. Parker, Iowa Falls
Harrison	B. E. Kenney, Woodbine	F. X. Tamisiea, Missouri Valley	A. C. Bergstrom, Missouri Valley
Henry	J. G. Widmer, Wayland	P. G. Couchman, Mt. Pleasant	W. H. Megordon, Mt. Pleasant
Howard	D. O. Maland, Cresco	P. A. Nierling, Cresco	P. A. Nierling, Cresco
Humboldt	R. W. Beardsley, Livermore	J. H. Coddington, Humboldt	I. T. Schultz, Humboldt
Ida	E. H. Heilman, Ida Grove	J. B. Dressler, Ida Grove	M. W. Grubb, Galva
Iowa	D. A. Paulsen, Victor	I. J. Sinn, Williamsburg	C. F. Watts, Marengo
Jackson	F. J. Swift, Jr., Maquoketa	L. B. Williams, Maquoketa	
Jasper	L. H. Koelling, Newton	L. D. Norris, Newton	J. W. Ferguson, Newton
Jefferson	F. H. McClurg, Fairfield	C. L. Palcheff, Fairfield	J. W. Castell, Fairfield
Johnson	R. C. Hardin, Iowa City	J. S. Greenleaf, Iowa City	E. J. Boyd, Iowa City
Jones	T. M. Redmond, Monticello	R. W. Myers, Monticello	T. M. Redmond, Monticello
Keokuk	E. R. Gann, Sigourney	R. G. Gillett, Sigourney	R. G. Gillett, Sigourney
Kossuth	D. L. Bray, Algona	J. M. Schutter, Algona	M. G. Bourne, Algona
Lee	G. H. Ashline, Keokuk	Sebastian Amberry, Keokuk	J. H. Ashline, Keokuk R. L. Feightner, Ft. Madison
Linn	L. J. Halpin, Cedar Rapids	K. W. Woodhouse, Cedar Rapids	H. J. Jones, Cedar Rapids
Louisa	J. H. Chittum, Wapelo	K. T. DeYarman, Morning Sun	L. E. Weber, Wapello
Lucas	R. C. Gutch, Chariton	R. E. Anderson, Chariton	A. L. Yocom, Chariton
Lyon	H. H. Gessford, George	S. H. Cook, Rock Rapids	S. H. Cook, Rock Rapids
Madison	R. W. Carson, Winterset	J. E. Evans, Winterset	J. E. Evans, Winterset
Mahaska	G. W. Bennett, Oskaloosa	R. L. Alberti, Oskaloosa	G. S. Atkinson, Oskaloosa
Marion	K. D. Banks, Knoxville	T. D. Clark, Knoxville	H. L. Bridgeman, Knoxville
Marshall	O. D. Wolfe, Marshalltown	H. E. Sauer, Marshalltown	R. C. Carpenter, Marshalltown
Mills	W. A. DeYoung, Glenwood	T. E. Shonka, Malvern	M. L. Scheffel, Malvern
Mitchell	M. O. Eiel, Osage	R. J. Smith, Stacyville	T. E. Blong, Stacyville
Monona	P. G. Ingham, Mapleton	P. L. Wolpert, Onawa	C. W. Young, Onawa
Monroe	F. N. Bay, Albia	D. N. Orelup, Albia	D. N. Orelup, Albia
Montgomery	S. R. Smith, Red Oak	G. M. Skallerup, Red Oak	E. L. Croxdale, Villisca
Muscatine	V. W. Swayze, Muscatine	Samuel Bluhm, Muscatine	K. E. Wilcox, Muscatine
O'Brien	I. E. Brown, Hartley	W. S. Balkema, Sheldon	E. B. Getty, Primghar
Osceola	F. B. O'Leary, Sibley	J. H. Thomas, Sibley	F. M. Rizzo, Sibley
Page	R. A. Powell, Shenandoah	K. V. Jensen, Clarinda	K. J. Gee, Shenandoah
Palo Alto	J. R. Hyde, Emmetsburg	C. C. Moore, Emmetsburg	H. L. Brereton, Emmetsburg
Plymouth	H. L. Vander Stoep, LeMars	F. C. Bendixen, LeMars	H. L. Vander Stoep, LeMars
Pocahontas	E. O. Loxterkamp, Rolfe	C. L. Jones, Gilmore City	C. L. Jones, Gilmore City
Polk	D. C. Wirtz, Des Moines	T. A. Bond, Des Moines	M. T. Bates, Des Moines
Pottawattamie	W. O. Griffith, Council Bluffs	I. J. Hanssmann, Council Bluffs	C. V. Edwards, Council Bluffs
Poweshiek	T. V. Niemann, Brooklyn	L. C. Hickerson, Brooklyn	T. V. Niemann, Brooklyn
Ringgold		J. W. Hill, Mt. Ayr	E. J. Watson, Diagonal
Sac	J. W. Gauger, Early	John Hubiak, Odebolt	C. E. Lierman, Lake View
Scott	J. R. Shorey, Davenport	A. B. Hendricks, Davenport	T. W. McMeans, Davenport
Shelby	J. H. Spearing, Harlan	R. E. Donlin, Harlan	J. H. Spearing, Harlan
Sioux	E. N. Eneboe, Hawarden	C. B. Murphy, Alton	M. O. Larson, Hawarden
Story	G. J. Hegstrom, Ames	K. C. Piercy, Ames	J. D. Conner, Nevada
Tama	L. G. Schaeferle, Gladbrook	A. J. Havlik, Tama	A. J. Havlik, Tama
Taylor	R. W. Boulden, Lenox	G. W. Riml, Bedford	R. W. Boulden, Lenox
Union	R. H. Kuhl, Creston	H. J. Peggs, Creston	
Van Buren	Kiyoshi Furumoto, Keosauqua	J. T. Worrell, Keosauqua	Kiyoshi Furumoto, Keosauqua
Wapello	J. B. Roberts, Ottumwa	E. B. Hoeven, Ottumwa	P. D. McIntosh, Ottumwa
Warren	C. A. Trueblood, Indianola	R. C. McGeehon, Indianola	C. A. Trueblood, Indianola
Washington	T. M. Mast, Washington	W. S. Kyle, Washington	G. E. Montgomery, Washington
Wayne	L. B. Calbreath, Humeston	C. F. Brubaker, Corydon	D. R. Ingraham, Sewal
Webster	E. B. Dawson, Ft. Dodge	J. F. Vincent, Ft. Dodge	C. J. Baker, Ft. Dodge
Winneshiek	Garfield Miller, Calmar	D. W. Wright, Decorah	E. F. Hagen, Decorah
Woodbury	P. L. Bettler, Sioux City	V. R. Heimann, Sioux City	D. B. Blume, Sioux City
Worth	R. L. Olson, Northwood	C. T. Bergen, Northwood	R. L. Olson, Northwood
Wright	R. A. Young, Clarion	J. R. Christensen, Eagle Grove	S. P. Leinbach, Belmond

MINUTES OF THE 1955 SESSIONS OF THE HOUSE OF DELEGATES

Iowa State Medical Society

Des Moines, Iowa—April 24-27, 1955

SUNDAY AFTERNOON SESSION

APRIL 24, 1955

The House of Delegates of the Iowa State Medical Society was called to order by the speaker, Dr. Herman J. Smith, of Des Moines, at 2:00 P.M., Sunday, April 24. Roll call was taken by registration cards. There were 104 delegates and 16 alternates present.

County	*Delegate*	*Alternate*
Adair	A. S. Bowers	
Adams	A. W. Brunk	
Allamakee		J. W. Thornton
Appanoose	E. A. Larsen	
Audubon	H. K. Merselis	
Benton	J. E. Blumgren	
Black Hawk	C. D. Ellyson	
	T. L. Trunnell	
	R. C. Miller	
	C. A. Waterbury	
Boone	R. L. Wicks	
Bremer	O. C. Hardwig	
Buchanan	R. L. Knipfer	
Buena Vista	H. E. Farnsworth	
Carroll	J. M. Tierney	
Cass	R. H. Moe	
Cerro Gordo	H. G. Marinos	
	J. E. Houlahan	
Cherokee	D. C. Koser	
Chickasaw	M. J. McGrane	
Clarke	H. E. Stroy	
Clay		D. H. King
Clayton		E. G. Kettelkamp
Clinton	R. F. Luse	
	V. W. Petersen	
Crawford	R. M. Johnson	
Dallas-Guthrie	W. A. Castles	
Davis		S. R. Jaskunas
Delaware	R. E. Clark	
Des Moines	F. G. Ober	
	E. P. Russell	
Dickinson		T. L. Ward
Dubuque	R. J. McNamara	
	P. J. Laube	
	D. C. Conzett	
Emmet	E. K. Vaubel	
Fayette	J. P. Gallagher	
Franklin	R. E. Munns	
Fremont	Kenneth Murchison	
Greene	L. C. Nelson	
Grundy	H. V. Kahler	
Hamilton		G. A. Paschal
Hardin	L. F. Parker	
Harrison	A. C. Bergstrom	
Henry	J. S. Jackson	
Humboldt	T. G. Herrick	
Iowa	D. F. Miller	
Jasper	J. W. Billingsley	
Jefferson	R. A. McGuire	
Johnson	E. J. Boyd	
	R. H. Flocks	
	J. S. Greenleaf	
	L. H. Jacques	
		J. M. Layton
	W. M. Kirkendall	
	E. F. Van Epps	
	S. C. Ware	
	G. C. Albright	
Kossuth	J. M. Schutter	
Lee	L. C. Pumphrey	
Linn	C. H. Stark	
	J. J. Keith	
		E. H. Files
	J. J. Redmond	
Louisa	L. E. Weber	
Lucas		R. E. Anderson
Madison	P. F. Chesnut	
Mahaska	K. M. Lemon	
Marion	H. L. Bridgeman	
Marshall	D. D. Harris	
Mitchell	T. E. Blong	
Monona	E. E. Gingles	
Montgomery	Oscar Alden	
Muscatine		K. E. Wilcox
Page	P. L. Spencer	
Plymouth	W. L. Downing	
Pocahontas		J. M. Rhodes
Polk	D. F. Crowley, Jr.	
		O. E. Elliott
	R. B. Stickler	
	F. C. Coleman	
	T. A. Bond	
	F. M. Burgeson	
	J. T. McMillan	
	G. E. Mountain	
	N. W. Irving	
	B. M. Merkel	
	D. C. Wirtz	
		D. H. Kast
	E. P. Lovejoy	
Pottawattamie	C. V. Edwards	
	J. D. Mahoney	
	N. D. West	
Poweshiek	J. R. Parish	
Sac	W. I. Evans	
Scott	J. F. Bishop	
	J. H. Sunderbruch	
		W. S. Pheteplace
	P. E. Gibson	
Shelby	J. H. Spearing	
Sioux	M. O. Larson	
Story	G. E. McFarland, Jr.	
	J. D. Conner	
Tama	C. W. Maplethorpe, Sr.	
Union	H. J. Peggs	
Van Buren		K. Furumoto
Wapello	W. C. Wolfe	
	E. B. Hoeven	
Warren	L. E. Hooper	
Washington	D. G. Sattler	
Wayne	C. N. Hyatt	
Webster	C. J. Baker	
	H. H. Allen	
Winneshiek	E. F. Hagen	
Woodbury	P. D. Knott	
		C. T. Maxwell
	W. K. Hicks	
	F. C. McCarthy	
	R. C. Mugan	
Wright	G. E. Schnug	

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF HOUSE

G. V. Caughlan	E. M. Kersten
L. A. Coffin	J. H. Sunderbruch
R. F. Birge	E. B. Howell
N. B. Anderson	Fred Sternagel
H. J. Smith	G. H. Scanlon
T. F. Thornton	D. F. Ward
A. F. Fritchen	R. N. Larimer
C. O. Adams	W. M. Sproul
P. W. Brecher	

Minutes of the special meeting of the House of Delegates held December 12, 1954, were approved as officially recorded and summarized in the January, 1955, issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Dr. Smith instructed the delegates on methods to

be followed in introducing supplemental reports of officers and committees and also resolutions. He then asked the permission of the House to appoint reference committees, and it was granted.

REFERENCE COMMITTEES

Articles of Incorporation and Bylaws

H. E. Farnsworth, Chairman ..... Storm Lake
D. C. Wirtz ..... Des Moines
W. K. Hicks ..... Sioux City
R. E. Clark ..... Manchester
V. W. Petersen ..... Clinton

Legislation and Public Relations

C. D. Ellyson, Chairman ..... Waterloo
E. A. Larsen ..... Centerville
C. N. Hyatt ..... Corydon
J. F. Bishop ..... Davenport
R. G. Gillett ..... Sigourney

Insurance and Medical Service

D. C. Conzett, Chairman ..... Dubuque
P. F. Chesnut ..... Winterset
E. P. Russell ..... Burlington
R. L. Wicks ..... Boone
R. C. Mugan ..... Sioux City

Miscellaneous Business

H. G. Marinos, Chairman ..... Mason City
H. K. Merselis ..... Audubon
M. F. Kiesau ..... Postville
J. E. Blumgren ..... Vinton

Reports of Officers

D. F. Rodawig, Chairman ..... Spirit Lake
D. G. Sattler ..... Kalona
W. A. Castles ..... Dallas Center
P. L. Spencer ..... Essex

General Practitioner Award

L. E. Weber, Chairman ..... Wapello
R. H. Moe ..... Griswold
P. R. V. Hommel ..... Elkader

Hospital-Physician Relations

R. N. Larimer, Chairman ..... Sioux City
E. M. Kersten ..... Fort Dodge
E. H. Stark ..... Cedar Rapids

Group Insurance

J. W. Billingsley, Chairman ..... Newton
H. J. Peggs ..... Creston
D. D. Harris ..... Marshalltown

It was moved and seconded that reports of officers and committees as published in the official HOUSE OF DELEGATES HANDBOOK be approved. This motion carried.

Reports of Officers

FROM THE OFFICE OF THE SECRETARY

The report of the Board of Trustees provides information on the activities of the Society, including comments about work of the staff, so this report is limited to factual data relative to American Medical Association, Iowa State Medical Society, and county medical society memberships.

MEMBERSHIPS

The Iowa State Medical Society gained four members in 1954, reaching a total of 2485 as compared with 2481 members in 1953. Forty-nine counties had 100 per cent membership as compared with 43 in 1953. During 1954 there were 97 eligible non-members while in 1953 there were 112. There were 60 ineligible physicians in 1954, as contrasted with 59 in 1953. This number of ineligible physicians consists mainly of D.P. physicians at institutions. During 1954, 133 physicians were retired or not in practice as compared with 134 in 1953. Total membership percentage in 1954 was 96 per cent, the same percentage as shown in 1953. The following counties attained 100 per cent membership during 1954.

Adams	Dickinson	Lucas	Sac
Boone	Emmet	Lyon	Shelby
Buena Vista	Floyd	Madison	Story
Butler	Grundy	Mahaska	Tama
Calhoun	Hamilton	Monroe	Taylor
Cass	Hardin	Montgomery	Union
Cerro Gordo	Henry	Muscatine	Van Buren
Chickasaw	Ida	Osceola	Wapello
Clarke	Jackson	Plymouth	Warren
Clay	Jasper	Pocahontas	Wayne
Davis	Kossuth	Polk	Webster
Delaware	Lee	Ringgold	Worth
			Wright

AMA MEMBERSHIP

In 1954, 2433 doctors were members of the American Medical Association. This is 97.9 per cent of our total membership and entitles the Iowa State Medical Society to three AMA delegates.

1954 MEMBERSHIP RECORD

County	Members	Eligible	Ineligible	Not in Practice or Retired	Pctge.
Adair	4	3	..	..	57
Adams	4	..	..	..	100
Allamakee	7	1	..	1	88
Appanoose	11	5	..	..	69
Audubon	5	1	..	..	83
Benton	17	2	..	..	89
Black Hawk	103	1	1	..	98
Boone	21	..	..	..	100
Bremer	17	1	..	..	94
Buchanan	9	1	9	..	90
Buena Vista	18	..	2	..	100
Butler	11	..	..	..	100
Calhoun	19	..	..	..	100
Carroll	24	1	..	..	96
Cass	16	..	1	1	100
Cedar	8	1	..	..	89
Cerro Gordo	65	..	..	..	100
Cherokee	15	2	6	3	88
Chickasaw	11	..	..	..	100
Clarke	7	..	..	..	100
Clay	10	..	..	1	100
Clayton	11	6	..	5	65
Clinton	52	4	2	..	93
Crawford	9	1	..	2	90
Dallas-Guthrie	25	2	5	2	93
Davis	14	..	..	..	100
Decatur	5	1	..	1	83
Delaware	10	..	1	1	100
Des Moines	45	2	1	1	96
Dickinson	7	..	..	..	100
Dubuque	70	1	..	2	99
Emmet	16	..	..	..	100
Fayette	19	1	..	3	95
Floyd	16	..	..	1	100
Franklin	8	1	..	1	89
Fremont	6	3	..	1	67
Greene	19	1	2	2	95
Grundy	14	..	..	..	100
Hamilton	13	..	1	..	100
Hancock-Winnebago	17	3	..	1	85
Hardin	21	..	..	2	100
Harrison	8	2	1	2	80
Henry	14	..	..	3	100
Howard	9	1	..	..	90
Humboldt	8	1	..	..	89
Ida	8	..	..	1	100
Iowa	13	1	..	1	93
Jackson	14	..	..	..	100
Jasper	21	..	..	3	100
Jefferson	11	1	..	1	92
Johnson	231	4	2	9	98

Jones	13	3	1	..	81
Keokuk	9	1	1	2	90
Kossuth	13	..	2	2	100
Lee	36	..	..	..	100
Linn	121	5	1	4	96
Louisa	4	1	..	..	80
Lucas	8	..	..	..	100
Lyon	5	..	..	..	100
Madison	8	..	..	..	100
Mahaska	18	..	..	1	100
Marion	15	6	..	1	71
Marshall	36	1	..	2	97
Mills	4	3	2	..	57
Mitchell	10	4	..	2	71
Monona	10	1	..	1	91
Monroe	8	..	..	..	100
Montgomery	17	..	..	..	100
Muscatine	18	..	2	..	100
O'Brien	16	1	..	1	94
Osceola	6	..	..	2	100
Page	23	2	5	..	92
Palo Alto	13	1	..	..	93
Plymouth	11	..	..	5	100
Pocahontas	8	..	1	1	100
Polk	323	..	4	18	100
Pottawattamie	64	2	1	6	97
Poweshiek	13	2	..	..	87
Ringgold	5	..	..	..	100
Sac	10	..	..	..	100
Scott	106	3	2	8	97
Shelby	7	..	..	1	100
Sioux	12	1	..	1	92
Story	42	..	1	2	100
Tama	15	..	..	..	100
Taylor	5	..	..	..	100
Union	14	..	..	..	100
Van Buren	5	..	1	1	100
Wapello	53	..	1	..	100
Warren	8	..	..	2	100
Washington	16	1	..	1	94
Wayne	7	..	..	1	100
Webster	52	..	..	3	100
Winneshiek	12	1	..	1	92
Woodbury	123	1	3	10	99
Worth	6	..	..	..	100
Wright	21	..	..	3	100
Total	2485	97	60	133	96

FINANCIAL STATEMENT

All funds due to the State Society have been collected by the secretary and turned over to the treasurer and all AMA dues have been remitted to the American Medical Association.

The excellent facilities provided in the Veterans Memorial Auditorium should make the State Society's 1955 Annual Session one of the best in its history. Very careful planning has been done for this year's meeting and we believe the scientific program will be outstanding as well as all other parts of the meeting, especially the scientific exhibits. As you know, we did not have scientific exhibits last year due to limited housing facilities. This year, however, we are happy to report that we have had more requests for scientific exhibit space than is available.

The secretary intends to present a supplemental report before the House of Delegates.

R. F. Birge, M.D., *Secretary.*

REPORT OF THE TREASURER

After the first complete year of operation under the new accounting system, it is our opinion that it has been a definite improvement. The various accounts cover specific items, giving a comprehensive picture at all times and simplifying the compilation of figures for any requested study. The monthly financial statement enables the officers to have a thorough understanding of the current financial status of the Society, thus accomplishing one of the main objectives we had in setting up the new system.

You will note in the following statement for 1954 that the Baldridge-Beye Memorial Fund made a payment of $3,665.00 to the American Medical Education Fund. This was in accord with the resolution passed by the House of Delegates in April stipulating that this Fund, which is comprised of $1.00 for each dues-paying member, be given to the American Medical Education Fund and earmarked for the State University of Iowa College of Medicine. The payment included the 1954 allotment, $2,108.00, plus the balance in the Fund at the close of 1953, $1,557.00.

ASSETS

Current Assets:		
Cash in Banks	$ 4,705.48	
Government Bonds	68,014.96	
Notes Receivable—		
Baldridge-Beye Funds	4,678.00	
Pension Insurance due from employees	657.50	
Total Current Assets		$ 78,055.94
Fixed Assets:		
Land	$ 5,000.00	
Building	36,749.85	
Office Furniture and Fixtures	12,821.99	
Total	$ 54,571.84	
Less: Depreciation to date	8,184.81	
Net Fixed Assets		46,387.03
TOTAL ASSETS		$124,442.97

LIABILITIES AND NET WORTH

Liabilities:		
Federal Unemployment Tax	$ 82.74	
Iowa Unemployment Tax	7.76	
Use Tax	98.78	
Local Taxes	1,100.01	
TOTAL LIABILITIES		$ 1,289.29
Baldridge-Beye Memorial Fund		
Balance 1-1-54	$ 6,235.00	
Add: Income 1954	2,108.00	
Total	$ 8,343.00	
Less: Payment to AMA Education Fund	3,665.00	
Net Baldridge-Beye Fund		$ 4,678.00
Net Worth:		
Balance 1-1-54	$114,281.82	
Add: Net Income 1954	4,193.86	
Balance, Period ending 12-31-54		$118,475.68
TOTAL LIABILITIES AND NET WORTH 12-31-54		$124,442.97

CASH RECEIPTS FOR THE YEAR 1954

Dues—State Society	$103,587.50
Dues—AMA	48,302.50
Journal Advertising	20,097.81
Journal Reprints	1,231.38
Annual Session	7,344.10
Miscellaneous	237.97
AMA Collection Commission	489.45
Blue Shield Refund on D. Taylor's salary	477.03
Interest—Government Bonds	1,567.98
Interest—Savings Account	304.20
TOTAL RECEIPTS	$183,639.92

EXPENDITURES FOR THE YEAR 1954

Annual Session	$ 6,091.49
Auditing	550.00
Baldridge-Beye Memorial Fund	2,108.00
Committee Expense:	
Grievance	1,783.45
Legislative	10,200.00
Medical Education—Hospitals	41.05
Medical Service	2,936.88
Medico-Legal	1,080.00
Public Health	1,734.81
Public Relations	3,851.12
Other Committees	3,835.30
County Society Services	2,992.31
Council Expense	1,877.26
Depreciation—Building	918.74
Depreciation—Office furniture and fixtures	1,897.83
Dues to AMA	48,302.50
Dues and Subscriptions	644.50
General	596.63
Insurance	192.00
Janitor Supplies	19.99
Journal—Printing and Engraving	21,012.82
Journal—Reprints	1,156.12
Lights, Gas and Water	697.20
Local Taxes	1,265.13
Office Stationery and Supplies	2,983.27
Pension Insurance	4,482.85
Postage	1,671.71
Repairs and Maintenance of Office Equipment and Building	98.72
Salaries	42,332.75
Salaries—Outside Secretarial	300.75
Service Contracts—Machines	351.40
Social Security and Unemployment Tax	769.49
Telephone and Telegraph	3,077.67
Travel Expense (Officer)	3,878.16
Travel Expense (Salaried Employee)	2,310.26
Trustee Expense	1,004.34
Use Tax	399.56
TOTAL EXPENDITURES	$179,446.06
Net Income	$ 4,193.86

N. BOYD ANDERSON, M.D., *Treasurer.*

REPORT OF THE BOARD OF TRUSTEES

The Trustees' report, presented at the special meeting of the House of Delegates in December, showed that 1954 was an active year. It also showed that your Society is financially sound. Our new office building completed in 1953 is paid for, the reserve bond fund totals $60,000, and we have no indebtedness. The Society has an income of approximately $105,000 received from annual dues of $50 from about 2100 members. The JOURNAL of the Society from advertising and reprints has an income of about $18,000, which approximates its cost of publication exclusive of salaries.

As to the expenditures of the Society, about $50,000 goes for staff salaries and pensions, and $30,000 is used for committee members' and officers' expenses, leaving rather a small balance for all of the other expenses. The details of the expenditures can be read in the Treasurer's report.

In 1954, as a result of the extra expense necessitated by the physician-hospital controversy, about $7,000 was expended for special legal counsel, extra meetings, telephone calls and printing news bulletins and the like. As a result, your Society ended the year with its cash reserve almost exhausted.

In July, 1954, the Executive Council and the Committee on Public Relations asked the Board of Trustees to set up a more active public relations program, with the addition of at least one more employee, this employee to be used half time by Blue Shield, which would share in his expense. The House of Delegates in December voted in favor of a resolution to that effect, and the Trustees are now, in January, in the process of carrying out these plans. As a result of these additional expenditures for 1955, the Trustees are compelled to ask the House of Delegates to continue the dues for 1956 at $50. This $50 is in addition to the $10 previously voted for the Iowa State Medical Society Education Fund.

During 1954, changes were made in the office staff and business methods were made more efficient and the work distribution more productive. The present staff of the Society is as follows:

Executive Secretary—Mr. Donald L. Taylor

Director of Scientific Education, Business Manager of the JOURNAL—Miss Mary McCord

Executive Assistant, Memberships and Woman's Auxiliary—Mrs. Hazel Lammey

Assistant Editor of the JOURNAL—Mr. Edward Hamilton

Administrative Assistant—Miss Matina Preftakes (in charge of television and WALLACE'S FARMER articles)

Secretary to the Executive Secretary—Mrs. Darlene McClanahan

Stenographers—Mrs. Ardyth Wheeler and Miss Mary Sloan

The staff had a very busy year with routine duties and especially with the additional work load caused by the hospital-physician controversy. Over 1800 overtime hours were furnished by the staff without additional expense to the Society.

During the year, the Trustees held eleven meetings, and there were two meetings with the Executive Council. Projects of interest that were initiated during the year are as follows:

The Trustees established a public relations award to be given to a county society for an outstanding job of public relations. The first award was made to to the Scott County Medical Society.

Two student delegates and one faculty advisory from the University of Iowa Medical School were sent to the meeting of the Student AMA in Chicago.

Four members of the Student AMA were guests of the Society at the state meeting in Des Moines in April.

The "Handbook of Resources Available to Physicians," developed by the Public Relations Committee was published at a net expense of about $2,000. A copy was sent to each member and one copy was also sent to the Executive Secretary of each of the other state medical societies. Copies sold to interested organizations helped to defray the cost of publication.

As voted by the House of Delegates in April, the Baldridge-Beye Memorial Fund was contributed to the AMA Educational Foundation. This included the balance in the fund and $1 from each dues-paying member in 1954. A total of $3,665 was sent to the AMA in December.

Nominations to the Board of Medical Examiners were made, and the governor appointed two new

members—Drs. John Billingsley of Newton and Frank Peterson of Cedar Rapids.

Officers and committee members attended many district and national meetings of a medical nature, including the two meetings of the AMA. The expenses of these delegates were paid by the Society.

Plans were made and are being completed for a larger and more profitable annual meeting to be held in the Des Moines Veterans Memorial Auditorium in April. These are but a few of the activities planned by the Board of Trustees during the year.

Nineteen hundred and fifty-five promises to be an expensive year for the Society. If the present unsolved physician-hospital controversy is not settled, and if an attempt is made to change the Medical Practice Act during the present legislative session, or if court action results, the necessary expenditures of the Society will greatly increase. As reported in the January issue of the JOURNAL, the House of Delegates voted to use not to exceed 50 per cent of our bond reserve, if it becomes necessary. Additional funds will also be made available by interested members. However, because of the augmented public relations program, no cash reserve will be available from the funds of the Society. The House also voted favorably on a resolution which stipulated that if additional funds are needed, the Board of Trustees shall have authority to impose additional dues up to $25 per member, to become payable upon receipt of notice. The Trustees will utilize the above funds as wisely and economically as possible.

Your Board of Trustees wishes to thank the office staff, the members of the many committees, our legal counsel, the other officers and many individual members for their loyal support and many hours of service in behalf of the Society.

W. L. DOWNING, M.D., *Chairman.*

Report of the Council

SECRETARY OF THE COUNCIL

The (Judicial) Council of the Iowa State Medical Society held its first meeting on Wednesday, April 28, 1954, immediately after the House of Delegates meeting. Dr. O. D. Wolfe was elected chairman, and Dr. E. F. VanEpps was elected secretary. The three new members who had been elected, Drs. T. L. Ward, J. H. Sunderbruch and H. J. Peggs, joined the Judicial Council at that session. Subsequent meetings were held on September 30, 1954, November 18, 1954, December 11, 1954, January 6, 1955, and February 24, 1955. The Judicial Council met as part of the Executive Council on October 14, 1954, and January 23, 1955.

Individually and as a group, the councilors have demonstrated their interest in all problems confronting physicians in Iowa. They have given of their time, and have attended the meetings faithfully.

The greatest part of the Judicial Council's time has been spent upon the physician-hospital controversy. The committee headed by Dr. W. D. Abbott, members of committees from the radiologist and pathologist groups, and the ISMS attorney, Mr. I. W. Myers, have kept the councilors informed, as negotiations went on. Several months before the Attorney General gave his first opinion, the Judicial Council had made the recommendation that the Society should develop a coordinated public relations program, and had given the further suggestion that members of the Society be asked to take the problem direct to the people, locally, through lay organizations and through local press conferences. It recommended further, that an Executive Council meeting be called, so that a unified policy could be developed and implemented. Such a meeting was held on October 14, 1954.

As regards the Iowa elaboration of the Code of Ethics, the Judicial Council approved a motion that the interpretation of ethical practice by the House of Delegates of the AMA and its Judicial Council be the rules of conduct for members in Iowa, such compliance having been directed by the Articles of Incorporation and By-Laws of the Iowa State Medical Society. However, it reiterated the belief that this Society's delegates to the AMA should continue in their efforts to secure the adoption of the Iowa elaboration by the AMA House of Delegates.

Until further notice, the following implementation of the Code of Ethics is to be followed, as regards billing for services:

(1) A joint statement for services rendered by two or more physicians shall be considered ethical, provided that the patient has requested such a statement.

(2) Fees must be paid to the individual doctor who has rendered the particular service.

(3) Clinics and partnerships may submit joint statements and receive joint payments when such clinics or partnerships have represented themselves to the public as such.

The Judicial Council's meeting on December 11, 1954, was held prior to the emergency session of the House of Delegates. Councilors were quite active in discussing the issues and in getting together resolutions for presentation to the House. Those resolutions were adpoted on the following day at the special session.

In order to communicate the gist of the Judicial Council's deliberations to the membership of the ISMS, it was suggested that a newsletter be sent to the deputy councilors, and that each of them be asked to read it before the members of his county society. In counties where no regular society meetings are held, it was thought that the letter could be read at medical staff meetings in the hospitals.

Group insurance took some discussion time, too. Dr. George Young's committee was given a vote of confidence for its work on behalf of the Society. The Judicial Council agreed with Dr. Young that one type of insurance coverage that had been proposed to his committee was really a form of compulsory insurance and should not receive consideration. Work on the subject is continuing, and a progress report will be made to the House of Delegates during its annual meeting.

Some changes in the Articles of Incorporation and By-Laws were considered. One of these proposes that the words "Judicial Council" be substituted for the word "Council" wherever the latter appears in that document. The distinction between the Judicial Council and the Executive Council could thereby be clarified. Another of them concerns the calling of Executive Council meetings. The councilors are concerned that the Executive Council holds so few meetings, and have recommended that a change be made in the regulations so that the officers of the ISMS can call it together whenever they think necessary.

The preceptorship program, despite the fact that the ISMS undertook to sponsor it, has had a hard

struggle for survival. Only after repeated appeals have gone out, has it been possible to persuade sufficient physicians to act as mentors for College of Medicine students. This program belongs to the members of the Society. It will fail unless they support it individually and actively!

The expanded Hill-Burton Act has such severe implications for medicine generally and, in the light of our physician-hospital conflict, for Iowa in particular, that one meeting of the Judicial Council was held for the discussion of it alone. Because the Act was discussed before the Executive Council, a review of the ideas expressed and the conclusions arrived at will be included in the report of the secretary of the Society.

The Judicial Council spent considerable time in discussing other matters, but space does not permit their being mentioned individually in this report. Suffice it to say that the councilors have worked diligently, willingly and objectively for the membership of the Society. Not all problems have been solved, but work for the benefit of Iowa medicine will be continued.

E. F. VANEPPS, M.D., *Secretary.*

FIRST DISTRICT

Allamakee County. Quad County Educational meetings were held twice during 1954, with physicians from Allamakee, Clayton, Fayette and Winneshiek counties present. There were two guest speakers who delivered lectures on scientific subjects at each of those gatherings.

A Woman's Auxiliary to the Allamakee County Medical Society was organized in April, 1954. The new chapter plans to take an active part in nurse recruitment.

Bremer County. As a truly county organization, the Bremer County Medical Society has virtually ceased functioning. A meeting that was to have been held on November 25, 1954, was called off when only six doctors came to attend it, and it has been five years since any physician from outside of Waverly has attended any of its sessions.

Except for one man who moved away and one who came to replace him, there has been no recent movement in the doctor population of the County.

Clayton County. For lack of a quorum, there was no meeting of the Clayton County Medical Society in 1954 after the one at which officers for the year were elected.

Three new physicians located in the County during the year.

Fayette County. The Fayette County Medical Society held regular monthly meetings during all but July and August, 1954, and those meetings usually consisted of a scientific program.

In September, the Fayette and Delaware societies held a joint session at Manchester to hear officers of the State Society discuss the functions of the state organization. One new physician has located in Fayette County during the year, but there have been no departures, no deaths, no outstanding contributions, no special health projects, and no work by a Woman's Auxiliary.

Howard County. Two meetings of the Howard County Medical Society were held during 1954. Two physicians have closed their practices and left the county, and one new one has opened an office in the course of the past year.

Mitchell County. Except for July, August and September, the Mitchell County Medical Society held regular monthly meetings throughout 1954. As a health project, it conducted county-wide vaccinations and immunizations for both grade and high school children.

One new physician has applied for membership in the County Society, and one has resumed his practice after completing a tour of military service.

Winneshiek County. The Winneshiek County Medical Society held four meetings during the year, including the annual meeting in December. In addition, three special sessions were held in connection with the controversy between hospitals and pathologists and radiologists.

One new doctor located in the County during the year, and, in the same period, the wives of Winneshiek County physicians activated a Woman's Auxiliary.

A. F. FRITCHEN, M.D., *Councilor.*

Deputy Councilors:

D. W. DOHNALEK, M.D., Allamakee
F. R. SPARKS, M.D., Bremer
M. J. MCGRANE, M.D., Chickasaw
P. R. V. HOMMEL, M.D., Clayton
A. F. GRANDINETTI, M.D., Fayette
E. V. AYERS, M.D., Floyd
P. A. NIERLING, M.D., Howard
T. E. BLONG, M.D., Mitchell
E. F. HAGEN, M.D., Winneshiek

SECOND DISTRICT

Nineteen fifty-four was a fairly active year in the Second District. There was one general district meeting held, at Mason City on October 27, when a panel of five speakers from the State Society discussed current problems facing organized medicine.

On December 5, a week before the special meeting of the House of Delegates, a caucus was held in Mason City, to which the delegates, alternates and deputy councilors from the District were invited. The Second District also was quite well represented at the special session in Des Moines.

Following are reports of activity in the individual counties.

Butler County. There was a gain of one doctor in the county during the year, and there were no deaths, retirements, or departures. Membership in the county and state societies was 100 per cent, and in the AMA, 50 per cent. Because of the distribution of doctors in the county, the activity of the county society was minimal. There are eight active members, two Life Members not in practice, and one member in military service.

Cerro Gordo County. Nine regular business and scientific meetings were held in 1954, each with a guest speaker. There also was a special meeting on July 15 at the Country Club, at which the wives of the doctors were guests.

The Society conducted a pre-school examination pro-

gram, as it had in former years. One member entered military service and one returned from a tour of duty, five men opened new practices, and four left the County to practice elsewhere.

Franklin County. The Franklin County Medical Society has not been very active during the past year. Most of the members attend the scientific meetings in Mason City.

Hancock-Winnebago Counties. The year has been rather uneventful for the Hancock-Winnebago Medical Society. Four meetings were held, at which there were combinations of business discussions and scientific programs. Two new doctors have located in the area.

Humboldt County. Humboldt County physicians sponsored pre-school examinations and immunizations again this year throughout the county. One doctor moved away, and another began practice in the County during the year.

Kossuth County. The staff of St. Ann's Hospital at Algona, which includes all of the members of the Kossuth County Medical Society, as well as portions of the memberships of the societies in surrounding counties, meets once each month, and business sessions and scientific programs are parts of those meetings. The speaker is always someone who is an authority in his field. The December meeting of the staff is always preceded by a bounteous dinner served by the Woman's Auxiliary and the Sisters of Mercy. One of the county's doctors left for Army duty in September, and despite the efforts of the community that he served, no one has been found to replace him.

The Medical Society appointed a doctor to sit on the players' bench at each home football game during the past season. Each athlete had previously been examined by his own physician to qualify for participation in high school sports.

Worth County. Since there are only three doctors in the County, there have been no meetings during 1954. The men have attended meetings in Cerro Gordo County. Recently, the medical profession in Worth County has been considerably augmented by the arrival of two new physicians.

Wright County. There have been five meetings of the Wright County Medical Society during the year, in a variety of locations, and at three of them there were guest speakers. All 19 of the doctors practicing in the County are members of the Society. There have been no deaths among them in 1954, and no new physicians have begun practice. The annual county-wide immunization of school children was conducted.

C. O. Adams, M.D., *Councilor.*

Deputy Councilors:

F. F. McKean, M.D., Butler
H. G. Marinos, M.D., Cerro Gordo
W. L. Randall, M.D., Franklin
T. J. Irish, M.D., Hancock-Winnebago
I. T. Schultz, M.D., Humboldt
H. G. Bourne, M.D., Kossuth
R. L. Olson, M.D., Worth
S. P. Leinbach, M.D., Wright

THIRD DISTRICT

There are nine relatively small county societies in the Third Councilor District. During the past year, there has been some loss of members by death; some doctors have entered the armed forces; and some new members have been added. O'Brien County lost three physicians by death, and a doctor each from Emmet and Palo Alto entered military service. On the other hand, O'Brien and Emmet counties each have two new doctors, and Clay, Dickinson and Pocahontas have one each.

Besides the county society meetings, there are larger gatherings sponsored by two groups of counties. O'Brien, Sioux, Lyon and Osceola counties have reactivated the Northwest Iowa Medical Society and have had two interesting meetings during the year. Dickinson, Clay, Emmet and Palo Alto counties have sponsored the Upper Des Moines Valley Medical Society. This year the summer meeting was held in August at Vacation Village, on Lake Okoboji. Clay, Emmet, Pocahontas and Osceola counties held regular meetings of their own, except during the summer months. Sioux and O'Brien counties each had three county meetings.

The president of the Woman's Auxiliary, Mrs. Lester Hegg, is from the Third Councilor District, and through her efforts there has been an increase in Auxiliary membership during 1954 in this area. The Sioux, Clay and Emmet Auxiliaries have entertained members of Future Nurses clubs, the Emmet County Auxiliary members have served lunch to the doctors at hospital staff meetings once each month, and the Clay County group has maintained a booth at the county fair to aid in nurse recruitment.

T. L. Ward, M.D., *Councilor.*

Deputy Councilors:

C. C. Jones, M.D., Clay
R. F. Wolcott, M.D., Dickinson
C. S. Kirkegaard, M.D., Emmet
Stuart Cook, M.D., Lyon
E. B. Getty, M.D., O'Brien
F. M. Rizzo, M.D., Osceola
H. L. Brereton, M.D., Palo Alto
C. L. Jones, M.D., Pocahontas
M. O. Larson, M.D., Sioux

FOURTH DISTRICT

During 1954 there was one district meeting of deputy councilors, delegates and alternate delegates. It was held in Storm Lake, but because of a snow storm, it was attended by no more than two delegates and two deputy councilors. Dr. Walter Abbott and Mr. I. W. Myers discussed the physician-hospital relations problem, and Dr. W. L. Downing, a trustee of the Iowa State Medical Society, spoke on the financial status of the state organization.

Woodbury County was chosen as one of the areas in which the Salk poliomyelitis vaccine was to be given. Children receiving it were in the first to third grades.

On May 13, Cherokee County held its annual summer scientific meeting, with speakers from the University of Nebraska College of Medicine. Buena Vista County held its annual golf and summer scientific meeting in June, with a complimentary dinner. Speakers were from the SUI College of Medicine.

County societies in the Fourth District that hold monthly meetings include Woodbury, Cherokee and Plymouth. Ida County holds joint meetings with Sac County, and Buena Vista holds quarterly sessions. Woodbury County Medical Society had scientific sessions at each of its monthly meetings, with speakers from surrounding universities and from the Mayo Clinic.

Changes in the membership of the societies in the district were quite extensive during 1954. There were three deaths, eight men opened practices (seven of them in Woodbury County and the other in Plymouth), and six left to enter practice elsewhere or to undertake residencies.

The Woman's Auxiliary has been active in Woodbury, Plymouth and Monona counties. Cherokee and Buena Vista counties do not as yet have organized Auxiliaries.

P. W. BRECHER, M.D., *Councilor.*

Deputy Councilors:

H. E. FARNSWORTH, M.D., Buena Vista
J. R. MARTIN, M.D., Carroll
C. E. BRODERICK, M.D., Cherokee
R. M. JOHNSON, M.D., Crawford
M. W. GRUBB, M.D., Ida
C. W. YOUNG, M.D., Monona
H. L. VANDERSTOEP, M.D., Plymouth
C. E. LIERMAN, M.D., Sac
D. B. BLUME, M.D., Woodbury

FIFTH DISTRICT

Boone and Story Counties. The Boone and Story County Medical Societies have met together, first in one county and then in another during the past year, holding ten monthly scientific sessions, with an occasional meeting for the conduct of business at the local level. In addition, there have been six staff meetings, scientific and business combined, of the Story County Hospital.

Story County lost one member by death, during 1954, one physician moved out of the county, and three came in and began practice. Since Story County has no Woman's Auxiliary, there were no organized activities for the doctors' wives.

Calhoun County. The Calhoun County Medical Society has been active in an attempt to secure the services of a county health nurse. Regular scientific meetings have been held throughout the year, with a great deal of interest. There have been two deaths during the year among the doctors of the County, two new members have been admitted to membership in the Society, and there has been one physician absent on military duty, but he will return to private practice during 1955.

Dallas and Guthrie Counties. The Dallas-Guthrie Medical Society met six times during the past year and had a scientific program at each meeting. All of the sessions were well attended. Guthrie County has four new physicians, and, in the course of the year, one left the county to practice elsewhere, and one entered military service. In Dallas County, one doctor has returned to practice after having been disabled for a year, one has entered practice, and one has moved from one town to another within the county.

Greene County. During the past year, the Greene County Medical Society has been expending a great deal of effort organizing and setting up a blood bank. It has now been operating for several months, and most of the obstacles have been overcome. The staff of the Greene County Hospital now has the services of a full-time anesthetist. One other physician began work within the county during the year, and there has been one death.

Hamilton County. The Hamilton County Medical Society has a dinner meeting on the second Tuesday of each month, and the hospital staff meeting is held in conjunction with that gathering. The current project is the establishment of a blood bank for the community. It is now functioning well. Attention has also been directed toward the improvement of hospital records. It is the desire of the group that when the osteopathic problem has been resolved, the hospital can be accredited.

There has been long and serious discussion of the problems that have arisen as the result of the physician-hospital controversy. The Hamilton County Society is firmly opposed to the control, in any degree, of medical practice by the hospitals or by the hospital administrators. The members are prepared to combat any legislation which might be designed to facilitate such control. Legislative contacts have been established.

The majority of doctors in Hamilton County deplore the unfavorable publicity which the American College of Surgeons precipitated during the past year in nationally circulated periodicals, for they think it is not in the best interests of harmony in organized medicine.

One Life Member died during the year, one new member was elected, and the current total enrollment is twelve.

Polk County. The Polk County Medical Society has been very active throughout the year. The Mediation Committee settled seven grievances which had come to its attention. During 1954, the Commitment Board Committee accepted the responsibility of assisting the courts and University Hospitals in properly carrying out the purposes of the Haskell-Claus Law.

The Child Health and Welfare Committee continues to serve the director of the Des Moines and Polk County Health Department in an advisory capacity in matters pertaining to review claims for medical care of county patients. Most of those claims are for drug items. All in all, the Polk County Medical Society has had a very interesting year.

Webster County. During 1954, the Webster County Medical Society conducted rather regular meetings and had many outstanding speakers. In addition, postgraduate meetings were held in Fort Dodge in five alternate weeks during September, October and November.

There was the usual activity and liaison work, including radio and television broadcasts, in which duly appointed members of the Society cooperated with various lay groups.

Two members of the Society went elsewhere to

practice during the year, and two new members were added.

E. M. Kersten, M.D., *Councilor.*

Deputy Councilors:

Ralph L. Wicks, M.D., Boone
Glenn S. Rost, M.D., Calhoun
A. M. Cochrane, M.D., Dallas
Elvin D. Thompson, M.D., Greene
W. A. Seidler, Jr., M.D., Guthrie
Bruce F. Howar, M.D., Hamilton
C. T. Bates, M.D., Polk
John Conner, M.D., Story
Charles J. Baker, M.D., Webster

SIXTH DISTRICT

The controversy over the corporate practice of medicine in Iowa has overshadowed all other problems of organized medicine in our district. Whereas there have been divergent viewpoints concerning the mechanics of achieving a solution, symptoms of a united front behind a single purpose and principle appear and reappear.

To disseminate information current on the subject, a district meeting was held in Marshalltown on October 5. There was an attendance of 58, with representation from all but Grundy and Hardin counties. Speakers included President Gerald Caughlan, Dr. Fred Sternagel, Dr. John Billingsley, Dr. John Conner, Dr. Walter Abbott and Mr. I. W. Myers. Invited guests were Mr. Don Taylor, Mr. Wilbur Quinn and Mr. Douglas Majury. There was little doubt that all who attended got a good grasp of the nature of the problem and its present and future significance.

On December 6, a special caucus of the district was held in Marshalltown. Invitations were extended to all delegates and deputy councilors, and every county in the district was represented by at least one physician, there being a total of 26 in attendance. This gathering again was found very much worth while, and the district as a whole sponsored two resolutions which were later proposed at the special meeting of House of Delegates in Des Moines, December 12.

Although this problem has by no means reached a solution, most physicians in the district are fairly well informed on the subject. At this writing, no contracts have been completed, but there have been negotiations between hospitals and physicians in certain specialties. It is our fervent contention that such contracts could be successfully concluded in the entire district, were there no interference from higher echelons in hospital organization.

For several years, our district has held a caucus in Marshalltown shortly after publication of the Handbook for the House of Delegates. The 1954 meeting was held on April 1 and was attended by all delegates and deputies. We endeavor to discuss all anticipated legislative problems. As a result of this meeting, not only are the delegates informed, but they and the deputy councilors have an opportunity to convey the gist of the deliberations to the societies that they represent. Rarely does a delegate from our district go to the annual meeting without knowledge and direction concerning the problems of organized medicine or without a notion of which doctors seem best qualified, as officers, to lead in the solving of those problems.

We cannot report that organization at the county level in the Sixth District has reached an optimum. Black Hawk, Hardin, Grundy, Iowa, Jasper, Marshall, Poweshiek and Tama counties hold regular meetings or reserve time for county society business at regular hospital staff meetings. Benton County cannot arouse sufficient interest on a county level, but most of the physicians who practice there attend meetings in Linn County regularly. Benton County does have a regular annual meeting.

During the year 19 new physicians began practice in the district, three were in military service, two undertook residencies, three discontinued practice and/or left the area, and six died.

Each county cooperates with lay groups in conducting public health programs, although there have been no unusual projects in the district this year.

We report with regret that not all county medical societies have seen fit to permit organization of Woman's Auxiliaries. Some counties have authorized such organization without success, but others have not approved when there was a good chance that chapters might be successfully set up. Hardin and Marshall Auxiliaries have been active in nurse recruitment. The Black Hawk Medical Society and its Woman's Auxiliary helped in the promoting of enterprises and exhibits in connection with the Centennial Celebration at Waterloo.

The Sixth District has not made a proud showing in the Preceptor Plan. It would seem that this program will have to be modified if it is to be successful. The University and the medical students have been enthusiastic about it, but not enough general practitioners have become interested. We sincerely hope that there will be a more enthusiastic acceptance of the project in future years.

The Grundy County Hospital has proved very satisfactory to both physicians and patients in the area. As yet they have encountered no osteopathic problems. Newton is in the process of adding a wing to the Skiff Hospital under the Hill-Burton program.

I wish to express my appreciation to all deputy councilors in the district, without whose cooperation and assistance the (Judicial) Council could not function.

Otis D. Wolfe, M.D., *Councilor.*

Deputy Councilors:

N. C. Knosp, M.D., Benton
C. D. Ellyson, M.D., Black Hawk
E. A. Reedholm, M.D., Grundy
L. F. Parker, M.D., Hardin
C. F. Watts, M.D., Iowa
J. W. Ferguson, M.D., Jasper
R. C. Carpenter, M.D., Marshall
S. D. Porter, M.D., Poweshiek
A. J. Havlik, M.D., Tama

SEVENTH DISTRICT

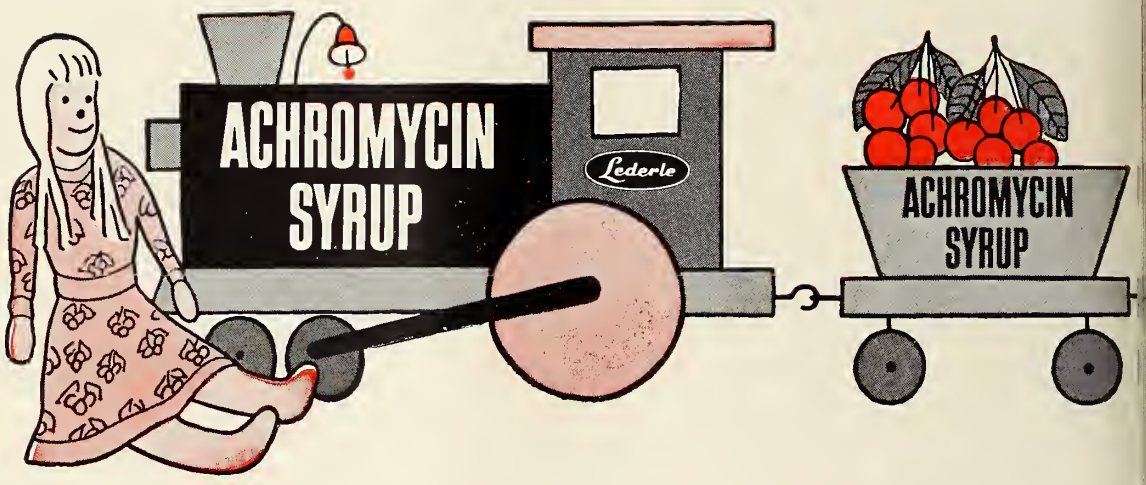
Considerable effort on the part of each deputy councilor was manifest in their reports for the year. Credit is warranted and is hereby given to those men who gave willingly of their time and effort to pass on the information about the Iowa State Medical Society to each county society so that all physicians could be kept informed and abreast of what was happening in Iowa Medicine.

We asked each deputy councilor to read the report of the meetings of the Judicial Council to the county society membership at their meetings, when feasible,

PLEASANT CHERRY FLAVOR!

125 MG. PER 5 CC. TEASPOONFUL! NO REFRIGERATION!

AQUEOUS—NO OIL.



ACHROMYCIN*

HYDROCHLORIDE
TETRACYCLINE HCl *Lederle*

OTHER FORMS OF ACHROMYCIN FOR PEDIATRIC USE:

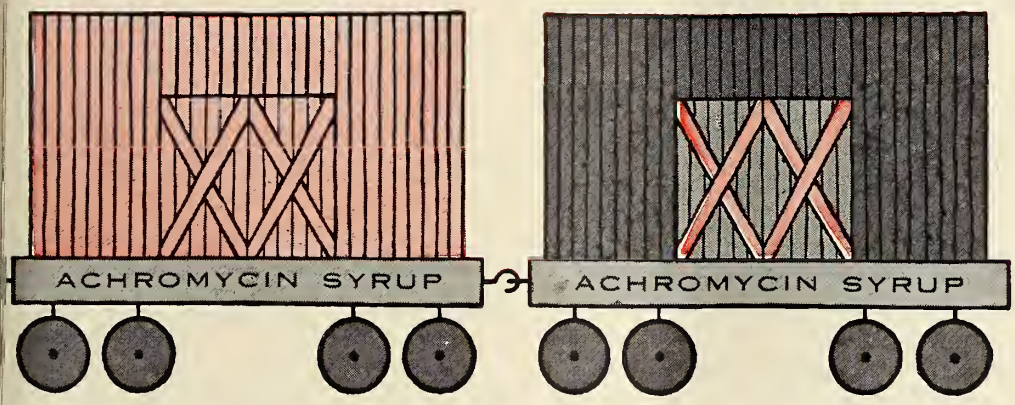
PEDIATRIC DROPS (Cherry Flavor): 100 mg. per cc. (approx. 5 mg. per drop)

ORAL SUSPENSION (Cherry Flavor): 250 mg. per teaspoonful (5 cc.)

SPERSOIDS* Dispersible Powder (Chocolate Flavor): 50 mg. per rounded teaspoontul (3 Gm.)

READY TO USE! IN 2 OZ. BOTTLES!

NO AFTERTASTE! MISCIBLE WITH WATER, MILK, SODA!



SYRUP

ACHROMYCIN • broad-spectrum • rapid diffusion • prompt control of infection • well tolerated • effective against Gram-positive and Gram-negative bacteria, rickettsiae, and certain viruses and protozoa.

Today's most widely prescribed broad-spectrum antibiotic, tested and accepted by foremost medical authorities, produced and marketed by Lederle.

Lederle

LEDERLE LABORATORIES DIVISION

AMERICAN Cyanamid COMPANY Pearl River, New York

*REG. U.S. PAT. OFF.

to serve the purpose mentioned above. A new system of an informative newsletter giving the highlights of these meetings will be started soon, since some of the Judicial Council's deliberations cannot be made public and some are just plain boring.

Special commendation must be given to Dr. Harry Jones of Cedar Rapids, who made all the arrangements for the Seventh District meetings. Because of his efforts, these meetings were efficiently planned to progress without delay to a satisfactory conclusion.

Eight out of nine counties were active in the District. Some of the smaller county medical societies utilized the meetings of the larger societies for their scientific information. I have the feeling that more and more physicians are taking greater interest in the problems that beset our profession. It takes a controversy such as the physician-hospital problem to awaken some of us to the dangers that can befall our profession when we allow the control of medical practice to pass out of our hands.

The Auxiliary has done superb work in the counties that have them. Their efforts have not been utilized sufficiently. Who can be better public relation persons than they? Give them greater opportunities this year to help us!

As a final thought, I would like to ask all members of the Iowa State Medical Society to do all in their power to promote the feeling in our youngsters that Medicine is a calling to which only those with high ideals, those with intelligence and those with a sincere desire to help people can aspire. Bad public relations many times can be laid to our own doorstep, and it is partly responsible for the decrease in numbers and caliber of students interested in medical schools.

EUGENE F. VAN EPPS, M.D., *Councilor.*

Deputy Councilors:

P. J. LEEHEY, M.D., Buchanan
H. E. O'NEAL, M.D., Cedar
V. W. PETERSEN, M.D., Clinton
R. E. CLARK, M.D., Delaware
D. F. WARD, M.D., Dubuque
F. J. SWIFT, M.D., Jackson
E. J. BOYD, M.D., Johnson
T. M. REDMOND, M.D., Jones
H. J. JONES, M.D., Linn

EIGHTH DISTRICT

This account of activities in the Eighth Councilor District cannot be altogether complete because not all of the deputy councilors have presented their reports. However, the majority of them have, and for the most part we can say that medical activity in this district has been quite normal during 1954. There has been only one trouble spot—namely, Muscatine County, where the osteopathic problem in the Muscatine Hospital has been the source of considerable concern. The difficulty still has not been resolved, but the man who has been particularly active in maintaining the M.D.'s point of view has been re-elected by his society, and his continued efforts may achieve a solution that is acceptable to the State Society.

The educational programs throughout the District have been very good. The larger county societies have had monthly meetings of a high caliber, and the smaller societies have had equally good quarterly ones.

Scott County Medical Society had a Health Fair in conjunction with the chamber of commerce, in May. And it repeated its Physicians Forums, a series of four meetings co-sponsored by the Davenport newspapers, during October and November. One of them, the one entitled "For Women Only," had to be repeated, and at its second presentation there were approximately 3,000 people present. Scott County Medical Society also participated in the mass inoculation of 3,000 first, second and third grade children with the Salk vaccine.

The new physicians entering the area have included four in Scott County, two in Henry County, and one in Lee County. Four physicians died, all of them practitioners in Scott County.

The activity of Auxiliaries throughout the District has been somewhat uneven. Doctors' wives in some counties are very active, and in others not at all so.

J. H. SUNDERBRUCH, M.D., *Councilor.*

Deputy Councilors:

F. D. WINTER, M.D., Des Moines
W. H. MEGORDEN, M.D., Henry
J. W. CASTELL, M.D., Jefferson
J. W. ASHLINE, M.D., Lee
R. L. FEIGHTNER, M.D., Lee
L. E. WEBER, M.D., Louisa
L. H. WHITMER, M.D., Muscatine
P. A. WHITE, M.D., Scott
KIYOSHI FURUMOTO, M.D., VanBuren
G. E. MONTGOMERY, M.D., Washington

NINTH DISTRICT

In the past year, we have three district meetings. The first was held in Appanoose County in September, the second in Davis County in October, and the third in Wapello County on February 1. They were well attended, a fact that reflects wide interest in the activities of the State Medical Society and in the problems that confront it. All county societies have had several meetings during the year, and most of them have had monthly meetings.

Three county hospitals have been built in this district during the past year. They are all in operation and have staffs that are well organized and are conducting monthly meetings. All county societies have participated in public health activities.

There has been a considerable increase in interest in the Woman's Auxiliary. The Wapello chapter meets once a month and on the same night that the County Medical Society meets. Under the leadership of Mrs. H. A. Spilman, there has been definite progress in the formation of new county organizations. In another year, there will probably be chapters in most of the counties in this district.

The doctor population has not materially changed during the past year. There have been three deaths and three new physicians have located in the district. There remain a few locations in the district that are unfilled, but those communities are amply cared for by the doctors in neighboring towns. There are ample hospital beds to meet the requirements of the district.

Taking it all in all, it appears that the medical situation in the Ninth District is very satisfactory.

E. B. HOWELL, M.D., *Councilor.*

Deputy Councilors:

E. F. RITTER, M.D., Appanoose
H. J. GILFILLAN, M.D., Davis

R. G. Gillett, M.D., Keokuk
A. L. Yocom, M.D., Lucas
G. S. Atkinson, M.D., Mahaska
H. L. Bridgeman, M.D., Marion
W. S. Chester, M.D., Monroe
P. D. McIntosh, M.D., Wapello
D. R. Ingraham, M.D., Wayne

TENTH DISTRICT

Adair County. One physician died, during 1954, further reducing the active practitioners in Adair County. As of the first of February, the annual election of County Medical Society officers had not been held. The deputy councilor suggested that because there are so few doctors, Adair County should try to combine with the society in some one of the surrounding counties. Most scientific work has been carried on in conjunction with staff meetings at the Adair County Hospital.

Adams County. Nearly all members of the Adams County Medical Society attend staff meetings at Rosary Hospital each month, and nearly always a fine and well organized program is presented there.

Clarke County. Most members of the Clarke County Medical Society attend staff meetings at the Clarke County Hospital. During the year one physician set up practice within the County, and two left to practice elsewhere, one of them after only a short stay.

Decatur County. The Decatur County Medical Society cooperated with the state T-B program in skin-testing 209 school children. Another such project is being planned for 1955. The Society has had several dinner meetings during the year, each of which was followed by a scientific program featuring an address by a well-qualified guest. Nearly all members engaged in postgraduate work in addition to what was provided by the County Society.

The society has participated in planning the extensive remodeling of the Decatur County Hospital, and it received a great deal of favorable publicity throughout the state when it negotiated a contract with the Hospital for restoring pathologic and radiologic services to physician control.

Madison County. Since the Madison County Medical Society has only eight members, its affairs are conducted rather informally, and the doctors look to the Southwestern Iowa Medical Society for educational programs.

The Madison County Medical Society worked out a charge slip for its members, on which costs for office calls, home calls day or night, special procedures, laboratory analyses and such medicines as the physician dispenses (largely penicillin) can be indicated. The slip also contains an invitation to the patient to question his doctor about fees that he does not understand. This slip is not a bill, but an itemization designed to show the patient particular charges of which his bill is the total.

There was one death among the physicians in the county during 1954.

Ringgold County. During 1954, the Ringgold County Medical Society cooperated with the state T-B program in the making of 4,835 miniature films. No active cases of tuberculosis were discovered, but 29 other pathologic conditions were revealed.

The community of Diagonal feted Dr. E. J. Watson on the completion of his fiftieth year of practice. One new physician announced his intention of beginning practice at Mt. Ayr in July, 1955.

Conditions at the Ringgold County Hospital are good. There are no osteopaths on the staff, though not so long ago whether there should be or not was the subject of a great deal of controversy.

Taylor County. Taylor County suffered the loss of two of its five practicing physicians by death during 1954, and though considerable effort has been expended in attempts to secure replacements for them, there has been no success as yet. County Society business, understandably, has come to a complete standstill. The remaining physicians attend hospital staff meetings in Corning and the meetings of the Southwestern Iowa Medical Society.

Union County. The Union County Medical Society met on the first Monday in each month, during 1954, with an average attendance of 90 per cent of its members. Meetings were in conjunction with those of the staff of the Greater Community Hospital of Creston, and nearly all of the current medical problems were brought before the group.

The Union County Medical Society presented two resolutions having to do with insurance at meetings of the Iowa State Medical Society. They were referred to appropriate committees for consideration. To the people of Union County, the Society distributed pamphlets that it had itself developed, entitled "Twelve Guideposts for the Selection of Health Insurance," and "What You Should Know About Health Insurance." The materials in those leaflets were taken from other literature of the sort that the Society had requested and secured from other societies throughout the country.

The Union County Society sent a further resolution to the Iowa State Medical Society regarding Blue Shield. It said, in essence, that there is some doubt about whether service type ceilings were ever warranted, and that some of them, whether or not they ever were altogether justified, are now getting out of date.

The Society was incorporated as of December 5, 1954.

Warren County. Most of the members of the Woman's Auxiliary to the Warren County Medical Society plan to affiliate with the Auxiliary in Polk County during the coming year.

It is exceedingly difficult for so completely rural a region as ours to have individual-county scientific programs, although certain of the hospital-staff meetings help to fill the gap. The Southwestern Iowa Medical Society meets twice each month, and always has an excellent dinner and a worthwhile scientific program. From 40 to 55 per cent of the doctors in the District are in attendance at an average meeting.

The Councilor wishes to remind the physicians of his district that because of the attack upon medicine by the hospitals, and apparently by the federal government as well, there is need for continued close co-

operation, through him, with the Iowa State Medical Society.

H. J. PEGGS, M.D., *Councilor.*

Deputy Councilors:

A. S. BOWERS, M.D., Adair
J. C. NOLAN, M.D., Adams
G. I. ARMITAGE, M.D., Clarke
E. E. GAMET, M.D., Decatur
J. E. EVANS, M.D., Madison
G. H. RODGERS, M.D., Ringgold
R. W. BOULDEN, M.D., Taylor
L. E. HOOPER, M.D., Warren

ELEVENTH DISTRICT

Cass County. Excellent papers have been read at the regular monthly meetings of the Cass County Medical Society this past year. Though the organization has a membership of no more than 15 doctors, a big annual meeting was held in May, with an all-day program featuring lectures by specialists from Omaha, Sioux City and Iowa City. The attendance was approximately 75. Pharmacists, dentists, veterinarians and registered nurses were invited to attend the banquet and to hear the evening papers, which were on subjects of common interest to the men and women in those allied professions.

A new wing of the community hospital was opened during the year, increasing its capacity to 75 beds. The addition cost $225,000, and was financed wholly by contributions.

There has been one death among the physicians of the County, and there have been no additions to their number.

Mills County. Because there are only five members of the Mills County Medical Society, it has not been feasible to hold meetings or conduct an active organization for many years past. Physicians attend scientific programs in Pottawattamie County.

Montgomery County. Meetings of the Montgomery County Medical Society were held regularly except during the summer months. A one-day clinic was held at Red Oak for all of southwestern Iowa on November 11.

One new physician, a general practitioner, located in the County during the year.

Page County. In 1954, the Page County Medical Society followed its usual practice of holding meetings nine months of the year. At eight of those gatherings there were scientific programs, with a guest speaker at each of them. The final meeting of the year is always a business meeting.

At the first meeting of the fall, there was a special program presented by three members of the faculty at Washington University School of Medicine, St. Louis, and all doctors in the Eleventh District were invited to attend.

The Auxiliary of the Page County Medical Society has functioned through the year, holding meetings at the same time as those of the Medical Society. Two of the scientific programs were shared by members of the Auxiliary.

During the year, one death occurred among the doctors in the county, two new men began practice, one returned from military service, and one left for a tour of duty with the Navy.

Shelby County. The Shelby County Medical Society sponsored a county-wide vaccination program in all schools. The income from the nominal charge was used to purchase books for a physicians' library at the new million-dollar, 45-bed Shelby County Myrtue Memorial Hospital, which opened in August.

The Woman's Auxiliary organized and conducted a Christmas party for the hospital employees. One Shelby County physician entered military service.

OSCAR ALDEN, M.D., *Councilor.*

Deputy Councilors:

L. E. JENSEN, M.D., Audubon
R. M. NEEDLES, M.D., Cass
KENNETH MURCHISON, M.D., Fremont
A. C. BERGSTROM, M.D., Harrison
W. A. DEYOUNG, M.D., Mills
E. L. CROXDALE, M.D., Montgomery
C. H. FLYNN, M.D., Page
C. V. EDWARDS, M.D., Pottawattamie
A. J. RYAN, M.D., Shelby

Reports of Standing Committees

COMMITTEE ON LEGISLATION

The Committee on Legislation has met frequently during 1954 and has attempted to fulfill its duties and responsibilities as set out in the By-Laws of the Iowa State Medical Society. Its attention has been directed principally to legislative problems in Congress. More than 500 bills having to do with health matters were under consideration by the 83rd Congress. Many of them remained inactive and were never considered by Congressional committees. A few of them, however, were of particular interest to the members of the Iowa State Medical Society.

The reinsurance bill for voluntary health insurance plans advocated by the Department of Health, Education and Welfare was opposed by the State Society. We also opposed the Kaiser mortgage loan insurance bill which would provide government-insured loans for the development of health facilities such as the Kaiser Permanente system on the Pacific Coast. Both of those bills were actively opposed by the American Medical Association. Opposition was expressed to the diagnostic and treatment-center provisions of the expanded Hill-Burton hospital survey and construction program that now have been included in Public Law 482. Despite the contrary recommendations of the American Medical Association, Congress adopted the program as it had been presented by the Department of Health, Education and Welfare.

During the summer of 1954, a questionnaire survey was conducted by the Committee to discover the attitudes of candidates for the House of Representatives and Senate in the Iowa Legislature. The survey was conducted through the Legislative Contact Men, and the response was satisfactory. On the basis of information obtained in that manner, we were in a position to inform our Legislative Contact Men which candidates were in agreement with the Iowa State Medical Society on specific proposals for health legislation. The Legislative Committee also stimulated as much interest as possible in a "get out the vote" campaign. That effort was particularly important, for in 1954 there was an off-year election, and voting in such years is usually light.

In October, the Committee conducted a question-

naire survey of all members of the Society on pertinent legislative problems. It was the second year that such a survey had been conducted, and we were pleased with the response. Out of a total of 2,306 questionnaires sent out, approximately 965 were returned. Opposition was expressed by 790 members to the federal reinsurance plan for voluntary health insurance programs; thus an overwhelming majority of the members of the Society apparently support the position assumed by the Committee on Legislation. The opinion of members of the Society as regards participation by physicians in the social security program was also sought. Six hundred forty-seven physicians were in favor of voluntary participation; 265 felt that there should be no participation, even on a voluntary basis; 60 felt that we should participate on a compulsory basis; and 605 were opposed to compulsory participation.

The physicians of Iowa are still in favor of a voluntary retirement program as provided in the Reed-Keogh-Jenkins Bill, for 535 voted in favor of that proposal, and 265 against it. One question dealt with the Hill-Burton hospital survey and construction program. The results showed that 389 doctors felt it should be conducted, and 513 were opposed to it. A total of 450 physicians felt that there should be increased government subsidy of chronic illness facilities, and 449 were against such government help. There was great opposition to federal mortgage loans which would provide help for the construction of HIP types of health facilities, 876 physicians being in opposition, and 41 in favor.

There were 508 physicians in favor of the extension of the Doctor Draft Law which is to expire June 30, 1955, and 389 felt that the law should be allowed to expire. Iowa doctors are still opposed to the treatment of veterans with non-service-connected disabilities in veterans' hospitals; 848 were opposed to the care of non-service-connected disabilities in those hospitals, and 77 were in favor of it. There also was opposition to the expansion of the scope of practice by chiropractors. Nine hundred five physicians expressed opposition to all such legislation, and 46 were against restricting the chiropractors. There was also a question regarding the Medical Practice Act; 794 physicians felt that the Act should be maintained in its present form, and 88 were not opposed to changes in it.

As this report is prepared, the Legislature is in session, and numerous bills in the health field are being introduced. A bill to expand the scope of the practice of chiropractors was introduced, and is being opposed by the Society. A bill designed to create a commission of the Legislature for the study of chronic illness will receive the Society's support. And a bill creating a commission on alcoholism has been introduced and is being supported by the Society. Since none of these has been considered by the Legislature as yet, a supplemental report on the activities of the Legislature will be made at the time of the annual meeting.

The members of the Committee on Legislation wish to express their appreciation for the excellent cooperation of all members of the Iowa State Medical Society, and particularly for that of the Legislative Contact Men. Appreciation is also extended to the members of the staff of the State Society, who have cooperated so well with this Committee. Special attention should be called to the help given by our legal counsel, Mr. I. W. Myers, by Mr. Donald Taylor, the executive secretary, and by Mrs. Dorothy Dolk, the assistant executive secretary, who have worked very closely with the Committee on Legislation.

F. C. Coleman, M.D., *Chairman.*

NECROLOGY COMMITTEE

The following members of the Iowa State Medical Society died during 1954:

Name	*Town*	*Age*
J. Frank Aldrich,	Decatur, Illinois	81
Joshua E. Bacon, Jr.,	Dubuque	53
Reu L. Barnett,	Atlantic	75
Peder J. Bursheim,	Des Moines	71
William H. Cash,	Lenox	82
Josiah M. Chittum,	North Liberty	86
Corwin S. Cornell,	Knoxville	68
Frank H. Creamer,	Boone	68
Anthony P. Donohoe,	Davenport	79
George A. Field,	Des Moines	81
Dennis F. Fitzpatrick,	Iowa City	79
Arthur S. Fourt,	Melbourne	59
Charles C. Fowler,	Lovilia	85
George W. Franklin,	Jefferson	79
Arthur A. Garside,	Davenport	58
Clark C. Griffin,	Vinton	80
Clinton E. Harris,	Grinnell	79
Francis W. Hobart,	Lake City	50
H. Clifford Johnson,	Perrysville, Ohio	48
Louis H. Jones,	Wall Lake	84
Thomas D. Kas,	Sutherland	71
Ernest L. Kaufman,	Ft. Atkinson	85
William C. Kennedy,	Somers	68
Nicholas Labagh,	Mystic	75
Russell L. Mantz,	Cedar Rapids	79
Roy V. Mater,	Knoxville	68
Frank N. Mead,	Cedar Falls	86
Jean C. Mendenhall,	Independence	68
Harris C. Moore,	Clearfield	64
Matthew T. Morton,	Estherville	64
Leon F. Richardson,	Collins	77
Frederick H. Roost,	Sioux City	77
Jesse E. Russ,	Rake	69
Prince E. Sawyer,	Sioux City	80
Ivan K. Sayre,	St. Charles	65
Lee E. Shafer,	Davenport	65
Albert E. Shaw,	Des Moines	73
John C. Shrader,	Fort Dodge	56
William O. Smouse,	Des Moines	78
David Unger,	Des Moines	77
James A. Wagner,	Primghar	73
Matt B. Weir,	Atlantic	73
Eugene D. Wiley,	Sioux City	50
Ralph E. Wiley,	Fontanelle	72
Edward B. Williams,	Montezuma	85
Joseph H. Wolfe,	Iowa City	72
Otis R. Wolfe,	Marshalltown	68
George W. Yavorsky,	Belle Plaine	71

(The Necrology Committee consists of the Councilors.)

REPORT OF THE MEDICO-LEGAL COMMITTEE

The Medico-Legal Committee has answered several inquiries during the year but has had no real action to report.

L. K. Meredith, M.D., *Chairman.*

COMMITTEE ON ARTICLES OF INCORPORATION AND BY-LAWS

The Committee on Articles of Incorporation and By-Laws has met once this year to discuss proposed changes in the documents with which it is concerned.

In so short a time as has intervened since they were approved, conditions have changed, and as a result it seems wise to review them and bring them up to date. Suggestions were received from the chairman of the (Judicial) Council, from Dr. G. C. Albright, former chairman of the Committee, from the secretary of the Society, and from the Society's legal counsel.

The Committee plans to study all suggestions further, and to hold another meeting before the middle of February. It will then make mimeographed copies of the changes which it recommends, and will send them to all delegates for study before the annual meeting.

A. B. PHILLIPS, M.D., *Chairman.*

COMMITTEE ON MEDICAL SERVICE

Because of the change in the AMA's stand regarding veterans' care, and because of the appointment of new committees to carry on the work in the physician-hospital controversy, many of the former activities of the Committee on Medical Service have been temporarily curtailed.

Dr. Gutch's Subcommittee on Veterans' Affairs met to consider two items relating to the care of veterans, and the results of this meeting, presented in detail in the Subcommittee's report, deserve the careful attention of all members of the Society. Every physician is vitally concerned.

A report on the meeting of state veterans'-affairs committee chairmen, which is to be held in Chicago on February 19, will be given orally at the April meeting of the House of Delegates.

Dr. Stark's Subcommittee on Hospital and Professional Relations has been inactive this year because arrangements for the transfer of medical services from Blue Cross to Blue Shield, along with other matters with which his Subcommittee would ordinarily have been concerned, have been taken over by the newly set up Committee on Medical Practice in Hospitals. Dr. Stark's report has a suggestion regarding the future of his Subcommittee which should be considered by the House of Delegates.

Dr. Sternhill's Subcommittee on the Care of the Indigent has started a survey of indigent care in Iowa that should have wide ramifications. The project should be continued in order to assure our Society and the public that this unfortunate group is receiving good medical care and that the public funds appropriated to finance it are economically and properly administered.

The report of the Subcommittee on Insurance covers the activity of Blue Shield during the past year, and it also reports on two meetings which the Subcommittee held on July 11, 1954, and January 9, 1955. The attention of all members is directed to the section of that report which covers the January 9 meeting, for it reviews the action taken on two resolutions which had been referred to the Subcommittee by the House of Delegates last April.

C. V. EDWARDS, M.D., *Chairman.*

SUBCOMMITTEE ON INSURANCE

The first meeting of the Subcommittee on Insurance was held jointly with the Physicians Relations Advisory Committee of Blue Cross-Blue Shield on July 11, 1954. At that meeting, there was a comprehensive presentation of current trends in income and population distribution in the United States. According to some recent surveys, there is developing in the United States a middle income group representing 35 per cent, or 18,000,000 family units, having an income after taxes of from $4,000 to $7,500 per year. In line with that discussion, there was some consideration given to the service income limits presently in effect in the various Blue Shield Plans over the country. The Subcommittee decided to defer action regarding the income levels until a subsequent meeting.

A number of problems and complaints which Iowa physicians have registered with Blue Shield Physicians Relations Department were discussed at some length. Many of the complaints were to be investigated, and reports on them were to be made to the board of directors of Blue Shield.

There was discussion regarding the joint billing by doctors for combined services rendered to patients under the Blue Shield program. Following an exchange of ideas, the following resolution was passed: "The Subcommittee on Insurance recommends to the Executive Council that it request the Board of Directors of Iowa Medical Service (Blue Shield) to arrange a system whereby joint bills for combined services to patients may be rendered by physicians to Blue Shield, so itemized that the amount due each physician is specified, and that it become the policy of Blue Shield to pay said physicians individually in accordance with precepts adopted at the last session of the House of Delegates of the American Medical Association."

The second meeting of the Subcommittee was held on January 9, 1955. Since the previous meeting, the Union County Medical Society had submitted a resolution which called for elimination of the Blue Shield full-service limits, and which recommended that Blue Shield offer strictly indemnity benefits, like any commercial insurance company. The Subcommittee discussed this resolution, and rejected it because the enabling legislation under which Blue Shield operates makes it mandatory that Blue Shield offer full service benefits. The Subcommittee felt it was not within its province to change the enabling act, and that the Union County resolution could not be considered favorably since its implementation would be contrary to existing law.

The Subcommittee considered two resolutions which had been referred to it by the House of Delegates last April. First was the resolution requesting the Iowa State Medical Society to prepare booklets explaining in down-to-earth language why people should purchase accident and health insurance and also information as to how they should go about selecting the company from which to purchase that coverage. Favorable action was taken on that resolution, and it was decided that work should commence at once upon the booklets, with the developed material being cleared through the Insurance Committee before being made available to the public.

A second resolution, or a second part of the one just mentioned, called for approval of specific accident and health policies and the issuance of a seal of

acceptance by the Iowa State Medical Society. The Subcommittee felt that the conferring of such approval was the responsibility solely of the Iowa Insurance Commissioner, and that the prerequisite investigation and evaluation would be an insurmountable job for any committee to undertake. As a result, it was decided that this second proposal should be rejected.

Another resolution referred to the Subcommittee by the House of Delegates was sponsored by the Wapello County Medical Society. It requested that the Iowa State Medical Society ask Blue Shield to reduce its full-service limits from $3,600 a year family income to $2,500, that a provision be added to the Blue Shield contract making it possible for a fee to be added to the regular service charge, and that the basis of this added fee should be the net worth of the patient—i.e., if the insured's net worth were $10,000 or more, the physician should be privileged to charge an additional fee.

The Subcommittee postponed action on the first part of that resolution, recommending instead that a study be made of the incomes of Iowans to determine to what extent they have increased since 1945, when Blue Shield was organized and when the full-service limit was set at $2,500.

In connection with the study of income changes in the past ten years, it was the recommendation of the Subcommittee that the Society set out a statement of principles which would outline the purposes which it intends Blue Shield to serve.

The Subcommittee briefly discussed the advisability of introducing deductible features into Blue Shield contracts, and the possibility of offering major medical or catastrophic types of policies.

Martin I. Olsen, M.D., *Chairman.*

SUBCOMMITTEE ON INSURANCE BLUE SHIELD PROGRAM

During 1954, Iowa Medical Service (Blue Shield) maintained a fairly steady growth, although the rate was less rapid than during preceding years. Membership was increased by 47,928, so that at the close of the year there were 484,235 members.

The earned income for the year was $5,380,655.18, as compared with $4,392,772.05 for 1953. Payments for physicians' services totaled $4,192,020.06, an increase of $435,251.33 over the amount paid by the Plan in 1953. The reserve for incurred and unreported claims for physicians' services was increased $57,400 during the year, and the percentage of claims incurred to earned income was 79.16 per cent for the year—a utilization very close to what was expected when the new contract introduced in 1953 was made available to the public.

The decrease from the high utilization of 1953 made possible the usual and necessary contribution to the reserve for contingencies of slightly over $269,000. Over and above this annual contribution to reserve, an additional $180,000 was added to make up for most of the losses suffered during 1953.

Total reserves now are equivalent to slightly over three months' average claims paid to doctors and the operating expenses of the Plan. This is considered the minimum amount necessary to assure financial stability to a Plan of this size. It also meets the minimum requirements for reserve that have been established by the Insurance Commissioner for operations of this type. It would appear that the contract benefits and rates charged for them are very nearly in balance, and that no additional services can be incorporated in the contract at this time. Normally, as a Plan grows older, the utilization tends to show some increase from year to year.

In the light of our past experience, we enjoyed a successful year financially, and are providing the public and the doctors a service that is financially sound and provides a very respectable return of benefits for the charges that are being assessed.

The administrative staff has had consistently increasing responsibilities, and has met them well. The staff is headed by Woodrow H. Sherin, executive director; T. J. Garbett, director of claims; W. Bryan Recknor, assistant director of claims; Daniel W. Coughlan, M.D., medical advisor and consultant; Mrs. Eleanor Roberts, supervisor of the Accounting Department; and Wilbur R. Quinn, director of physician relations. In addition to the administrative staff, there are 33 full time employees.

The processing and payment of claims constitutes the major and certainly the most difficult function of the office. An average of nearly 12,000 Doctor's Service Report forms are received and serviced each month. Of course, in some instances Blue Shield does not assume liability for the services reported. However, it did make payment for 136,130 services reported by doctors throughout the state last year. The work of the Claims Department has been consistently current during the year, with the result that doctors were paid promptly for services reported. The semimonthly claim check has proved an advantageous system of payment, both from the standpoint of the participating doctors and of the Claims Department.

The year 1954 has seen many difficult problems arise, some of them having a possible effect on the future course of the Blue Shield program. The doctor-hospital controversy and the subsequent negotiations, which were not completed during the year, have, for the most part, prevented consideration of any new contract features or revisions in contracts. The professional services involved in the controversy are an integral part of the practice of medicine, and yet they are included, in part, in both Blue Cross and Blue Shield contracts. Until a definite decision on this matter is reached, it is virtually impossible to make a transfer of these services or other related professional services from Blue Cross contracts to Blue Shield contracts. Blue Shield did propose an agreement which, as a temporary measure, would have permitted the carrying on of existing contracts with no material loss of benefits or increase of rates to Blue Cross-Blue Shield subscribers, and which could have functioned to handle the situation during the negotiations and the subsequent transfer in billing practices of hospitals and doctors. Although that agreement did not become operative during 1954, it could still be put into effect. It is to be hoped either that the controversy will be settled or that by some other means the agreement will become operative during the early part of 1955.

Shortly after the close of the 1954 annual meeting, work was started on the formulation of a method of joint billing for services rendered by doctors for cases which would be covered by Blue Shield benefits. Several conferences were held with participating physicians, and following the June meeting of the American Medical Association, at which time further

definition of bills submitted to prepayment plans was clarified, action was started to develop a form for use in connection with Blue Shield claims. Considerable negotiation was necessary, and the developed form was submitted to doctors throughout the state for suggestions and criticisms. After several revisions, it was approved by the Judicial Council of the Iowa State Medical Society, approved by the Board of Directors of Iowa Medical Service, and reviewed and commented upon by the Judicial Council of the American Medical Association. Shortly after the start of 1955, the joint billing form was distributed to all doctors in Iowa and was put into use by the Blue Shield Plan.

A rather significant negotiation was carried out with the Rath Packing Company in order to provide a special Blue Shield contract for that firm's employees. Previously, the coverage had been handled through Health Service, Inc., and Medical Indemnity of America, Inc., the national Blue Cross and Blue Shield insurance companies. Negotiations involving officials of the Rath Packing Company, the Black Hawk County Medical Society and the Board of Directors of Blue Shield finally culminated in Blue Shield's developing a special contract identical with the one previously offered through the national companies and fully approved by the Black Hawk County Medical Society. It will continue coverage of all Rath Packing Company employees through Blue Shield locally. This is the largest single group contract written by the Plan, for it encompasses approximately 15,000 members.

During the year, your local Plan has been asked to participate in several national enrollments involving large numbers of employees of some of the biggest employers in the country. The usual request for benefits in such cases is for a uniform, standard contract for all employees throughout the country, regardless of where they are located. It is virtually impossible for your Plan to engage in that type of business, for the specifications very rarely correspond with the ones in its own contracts.

It has become increasingly difficult for Blue Shield Plans to participate in national enrollment because of the wide variation of contract benefits and fee schedules. There is virtually no common denominator that they can use. In contrast, the commercial insurance companies are flexible enough to meet demands made by employers and employees. Consequently, they are taking the largest and most desirable group coverage away from Blue Cross-Blue Shield Plans. In many cases, the need for uniformity has resulted in the corporate customers' buying somewhat inferior contracts simply for the sake of achieving uniformity of benefits.

But despite these inroads, the Blue Shield Plan has continued to be the leader in providing benefits to the public and has continued to be the yard-stick by which other coverages are measured.

MARTIN I. OLSEN, M.D., *President.*
Iowa Medical Service

SUBCOMMITTEE ON VETERANS' AFFAIRS

Since the 1954 annual meeting of the State Medical Society, the only meeting of the Subcommittee on Veterans Affairs was the one held on November 9, 1955. Dr. H. H. Kersten, Dr. R. A. Dorner, Dr. L. H. Kuker, and the chairman were the members present. Dr. Fred Sternagel, a trustee, also attended.

The Subcommittee reviewed the actions of the ISMS and the AMA relative to the treatment of veterans with non-service connected ailments. It agreed that it should carry on its activities in compliance with the policies which those organizations had established.

It also reviewed a communication from the Veterans Administration that had been referred to it by the Board of Trustees of the Society. The letter invited the Society to enter into a contract for the establishment of a system of treating veterans in their home communities by private practitioners.

The Subcommittee prepared the following answer:

"On August 30, 1954, a proposal was submitted to the Iowa State Medical Society by the Chief Regional Officer of the Veterans Administration for the provision of medical services to 'eligible veterans' by member physicians of the Iowa State Medical Society.

"The proposed agreement was submitted to the several members of the Subcommittee on Veterans Affairs of the Iowa State Medical Society for study. On November 9, 1954, the Subcommittee met in Des Moines and expressed unanimous disapproval of basic provisions of the proposed agreement.

"In taking this position, the Subcommittee members were guided by the following considerations:

1. The House of Delegates of the American Medical Association has adopted a resolution generally opposing the provision of medical care for non-service connected disabilities by the Veterans Administration.

2. The proposal submitted by the Veterans Administration to the Iowa State Medical Society does not limit treatment to bona fide service-connected disorders. It is, therefore, not in agreement with the expressed stand of the American Medical Association. Acceptance of the proposal by the Iowa State Medical Society would be directly contrary to the official declaration of policy by the American Medical Association, and would not be in the best interests of the medical profession generally, in that it would, to a degree, make participating members of the Iowa State Medical Society agents of the Veterans Administration in caring for non-service connected disorders.

3. The view was expressed by members of the Subcommittee that the issues involved here are national in scope, and that the Iowa State Medical Society should not attempt to solve them on a regional basis.

"In view of these general considerations, it was the will of the Subcommittee that the primary purpose of the Veterans Administration medical facilities is the provision of the highest standards of medical care for veterans with service-connected disabilities. The Veterans Administration should, in general, limit its medical efforts to serving that function. No action by state or national medical societies should in any way compromise the standards of that care.

"It was suggested that the American Medical Association be requested to submit a suitable counter proposal to the Veterans Administration which would enlist the support of American doctors generally in establishing a program which would expand and augment medical care of all types for veterans having genuinely service-connected disorders.

"It was suggested further that suitable publicity be given to this positive aspect of the action of organized medicine in dealing with this problem.

"The Subcommittee reviewed the action of the Exec-

utive Council at its meeting of July 14, reaffirming the position of the American Medical Association and agreed to cooperate to the fullest extent in supporting that position."

Following this action, the subcommittee meeting adjourned at 2:00 p.m.

In a communication dated January 5, 1955, the chairman of the Subcommittee was informed by the AMA that there will be a meeting on February 19, 1955, in Chicago, to be attended by the chairmen of state committees on veterans' affairs, or by their representatives. Suggested items for that discussion were listed as follows:

1. Recent statistical data submitted by the Veterans Administration
2. Recent liaison meeting with the American Legion
3. The problem of service presumption
4. Data to be used in the Committee's newsletter
5. Activities being carried on in the states

There will probably be a supplementary oral report from the Subcommittee on Veterans Affairs presented at the Society's annual meeting.

R. C. Gutch, M.D., *Chairman.*

SUBCOMMITTEE ON HOSPITAL AND PROFESSIONAL RELATIONS

In order to make this report intelligible (for it is really no report at all), I shall present the reasons why this Subcommittee failed to function this past year, and why perhaps it will never function again. It was very busy up to the time, in 1953, when it submitted its report to the Executive Council on the Hospital and Specialist problem. From then on, it was left with no projects. New committees were appointed to consider the problem, to implement some of the work that we had done, and, finally, to concentrate the work in a more convenient and practical locality.

Now, Dr. Abbott's Committee on Medical Practice in Hospitals carries on one of the most important original functions of the Subcommittee on Hospital and Professional Relations. Whatever Dr. Abbott's group doesn't cover will lie within the province of the apparently new Legislative Committee on Hospital and Professional Relationship.

As a result, there is little left for this Subcommittee to do. Because there seemed no reason to make demands upon the time and energies of the members, it has held no meetings this past year.

The Society is asked to take my personal assurance that the members of the Subcommittee, through repeated personal meetings and correspondence, have taken most active parts (some of them throughout the state) in support of the doctors' point of view in the physician-hospital negotiations. But I should like to suggest that the Subcommittee, as such, be discontinued, and that the members be given opportunities to serve in some other capacity.

C. H. Stark, M.D., *Chairman.*

SUBCOMMITTEE ON CARE OF THE INDIGENT

The Subcommittee on Care of the Indigent accepted the task of reporting on the attention being given to the poor throughout Iowa without knowing of any previous studies that might have served as a guide, and without a mandate concerning the objectives that it should try to achieve. Furthermore, it had no express or implied instructions regarding the technic to be employed or the manner in which the subject should be approached. For those reasons, it proceeded merely as it thought best.

A questionnaire was prepared and sent to the directors of welfare in the 99 counties of the state. The questions that it contained were calculated to get for the Subcommittee some factual data concerning the numbers of indigents of various categories who apply for cost-free medical care and of those who receive it. The figures that were requested were those for the calendar year 1953 and the first six months of the calendar year 1954.

QUESTIONNAIRE

1. Name of county reporting————
   (a) Population of the county as of most recent date (estimate adequate)————
2. Number of families and individuals eligible to receive aid for medical services in the following categories:
   (a) Direct Relief: Families (number)————
   Individuals————
   Number of individuals actually receiving aid for medical services in 1953 and first half of 1954————
   (b) ADC Families————
   Individuals————
   Number of individuals in this category who received aid for medical services in 1953 and first half of 1954————
   (c) OAA Families————
   Individuals————
   Number of individuals in this category who received aid for medical services in 1953 and the first half of 1954 ————
   (d) Number of individuals who received Soldiers' Relief (medical only)————
3. Number of individuals from your county who received aid as state cases at University Hospital in Iowa City in 1953 and the first six months of 1954————
   (a) Your county quota of money allocated to the University Hospital and your quota of patients allotted————
4. Please submit a fee schedule for medical and hospital services as currently prevails in your county.

Answers of varying degrees of completeness were received from 51 of the 99 counties. Those replying represent a good cross section of the counties of the state, however, there being proportionate numbers of large, medium and small ones.

A tabulation of the answers to our questions can only reveal general averages. It must fail to show the wide divergences that prevail, even in counties of comparable size and location. These will be referred to in the general comments, later in this report.

COUNTIES REPLYING, GROUPED BY SIZE

Under 10,000 population	3
10,000 to 25,000	30
25,000 to 50,000	12
Over 50,000	1
Total	51

DIRECT RELIEF STATISTICS

January, 1953 to June, 1954 (inclusive)

	Number	Average per county	No. counties reporting
Families on direct relief	3,547	89	39
Individuals on direct relief	5,786	144	40
Individuals receiving medical aid	9,404	209	40

The discrepancy between the number of persons said to be eligible for direct relief and the number of persons said actually to be receiving medical aid probably is the result of a misunderstanding of the question in some instances and of a failure to supply the requested statistics in other instances. Officials in some counties seem to have included, in their figures on the third line of question 2 (a), the people who received medical aid without qualifying to receive any of the three categories of subsistence benefits. And there were some officials who failed to supply any statistics for the families and individuals qualified to receive subsistence relief.

In one county where there were only 64 individuals qualified for direct relief, there were 438 orders for medical services, or an average of eight medical services per individual.

ADC RELIEF STATISTICS

January, 1953, to June, 1954 (inclusive)

	Number	Average per county	No. counties reporting
Families on ADC	3,152	65	48
Individuals on ADC	10,890	242	45
Individuals receiving medical care	2,349	54	43

Here is truly an amazing revelation. Of 10,890 individuals in this category, only about one out of every five, or twenty per cent, received medical care as a ward of the county.

OAA RELIEF STATISTICS

January, 1953, to June, 1954 (inclusive)

	Number	Average per county	No. counties reporting
Families on OAA	11,409	335	34
Individuals on OAA	19,729	420	47
Individuals receiving medical care	9,100	216	42

Less than fifty per cent is a small share of elderly people to have received medical care. Children cannot have been included to any considerable extent in these numbers. Indeed, since the number of individuals is less than twice the number of families, considerable numbers of the recipients are obviously elderly single people.

A report of the results of the inqury regarding medical care from Soldiers' Relief scarcely lends itself to tabulation. The 32 counties from which replies to this question were received had 2,929 individuals receiving medical care from Soldiers' Relief, an average of 66 per county.

The replies to the Subcommittee's questions about University Hospital cases and about the numbers allotted to the counties each year can likewise be simply summarized. From the 50 counties that replied to that question, 6,832 individuals were sent to the Hospital as state cases during the 18 months in question, despite the fact that the total of the quotas for those counties was only 3,468. In other words, at least two cases were admitted for each case allotted. But since orthopedic and obstetric cases are not charged to quotas, the situation may not be so serious as it would at first appear. In cases sent to University Hospital, as in other practices about which the questionnaire solicited information, there was shown to be a great divergence among counties. For example, one county having a quota of 139 sent 954 cases. Another, with a quota of 45, sent only 40. Proximity of a county to Iowa City is undoubtedly a factor in that disproportion.

There was no attempt made to present any breakdown in the fee schedules that were submitted. It was obvious, however, that most counties follow the Blue Shield pay schedule for both X-ray and medical and surgical services. The Subcommittee feels that those rates represent a reasonably satisfactory schedule of compensation.

From the replies to the questionnaire, the Subcommittee has reason to think that medical care of the indigents in our state is adequate. And it appears that the relationships between county medical societies and county boards of supervisors, together with their welfare directors, is generally cordial and marked by mutual respect. Of special significance is the evidence that patient-physician relationship is maintained to a degree that is essential to the practice of medicine in a free enterprise system.

A survey of this type instantly suggests the need for others like it. One such study, an independent investigation into the operation of county hospitals and into the contributions those hospitals make toward the care of the indigent, seemed especially in order. At a meeting of the Subcommittee, on January 10, 1955, a questionnaire was approved for submission to the trustees of all county hospitals in the state. The following questionnaire was submitted to all the County Hospitals in the state of Iowa.

1. Would you favor a change in the Iowa law to permit trustees of county hospitals to certify a millage for operational costs in addition to the present millage for retirement of bonds and maintenance?

2. Is the present system working satisfactorily in your county?

The following is the report on the replies received:

a. Number of reports....2.

b. 15 replied "No" to question 1 and "Yes" to question 2.

4 replied "Yes" to question 1 and "No" to question 2.

3 gave mixed accounts.

It would appear from this survey that most of the hospitals are not in favor of any basic change in the matter of financial support to their institution and that they are satisfied with the current plan of operation.

The Committee on Medical Services to the Indigent of the Iowa State Medical Society is interested in the

problem of payment for hospital bills of indigent patients admitted to county hospitals.

The provision that these bills be paid through the Overseer of the Poor has met with considerable difficulty in some counties. If there is sufficient opinion to warrant, we may suggest a change in the Iowa law to permit the trustees of county hospitals to certify, for example, one-half or one mill per annum for the general operation of the county hospital as well as and including the care of medical indigents who are hospitalized.

The Subcommittee acknowledges the assistance given by the staff of the State Society in distributing the questionnaires, and to the officers of the Society for the opportunity that was given it to serve the cause of organized medicine, at least in a small way.

I. Sternhill, M.D., *Chairman.*

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The Committee on Medical Education and Hospitals held one meeting in December, 1954, to which it invited representatives of the State Department of Health, the SUI College of Medicine, the Iowa Academy of General Practice and the Veterans Administration. At that joint meeting, postgraduate education was discussed in the hope that some plan might be evolved for stimulating attendance at such courses.

It was decided to set up a central coordinating office in the State Society headquarters, where a record of all postgraduate teaching can be scheduled. This arrangement should make it possible to avoid conflicts in dates for meetings and short courses.

Past methods will continue to be used, but it is hoped that some new ones can be tried on an experimental basis. The possibility of extension education from the College of Medicine was mentioned and received favorable comment.

A survey of what was done in 1954 is to be made, and another meeting will be held in the near future to start plans for 1955.

Lee Forrest Hill, M.D., *Chairman.*

GRIEVANCE COMMITTEE

At the start of 1954, the Grievance Committee had eight cases that had been held over from the preceding year. Of those, four are still open. Of the 21 new cases, two are in the stage of preliminary correspondence and have not yet been considered by the Committee, ten remain in a state of active negotiation, five have been tabled pending further developments and the remainder have been settled.

The Committee met eight times during 1954, with an average attendance of three-fourths of its members.

As in the past, many of the grievances resulted from an endeavor on the part of the physician to collect an overdue account. In several instances, the complaintant has considered a fee unreasonable, but has expressed his willingness to accept the Committee's decision, even if its investigation disclosed that the fee had been right and proper for the particular situation. There have been several instances in which a lawyer presenting a complaint for a client with an overdue account has told the Committee of his intention to offer a counter-suit for malpractice if the doctor undertook legal action in an effort to collect, but, nevertheless, has asked that the Committee attempt to settle the matter. There have been instances in which negligence has been charged, and in several cases the grievance arose from failure on the part of the physician to explain a contemplated procedure.

Without exception, the doctors whom it has been necessary for the Committee to approach have been very cooperative. Many of them, when they met with the Committee, have expressed their appreciation of our intercession, even though the Committee has tried scrupulously to avoid showing any partiality toward the physician. Rather, the Committee has tried to weigh the issues in each problem purely on their merits.

Thanks to the numerous articles in lay publications in recent months, the doctor, the care he renders and the fees he charges are matters of great public interest. The Committee cautions the doctors of Iowa to take that time which is necessary to make sure the patient understands what is to be done, to be sure that he discusses fees before he performs any procedure, in order that there can be no misunderstanding, and last—though by no means least—to exercise the utmost discretion when commenting on things medical, whether what he says pertains to his own acts or to those of another physician.

Charles H. Flynn, M.D., *Secretary.*

COMMITTEE ON PUBLIC HEALTH

The Committee on Public Health performs a coordinating service for nine subcommittees of the Iowa State Medical Society, ones concerned with cancer, geriatrics, arthritis and rheumatism, rehabilitation, maternal and child health, mental health, industrial health, national health associations and rural health. Now completing its second year of service, the Committee has begun integrating its work with that of numerous lay organizations and committees, such as the Farm Bureau, the Iowa Manufacturers Association, and the Iowa Engineering Society, which have a considerable interest in various aspects of public health work.

When the Committee held its annual meeting, on September 29, the attention of its members were focused successively on numerous facts and problems. Some of those are presented in subcommittee reports here in this Handbook. The following is a summary of some others of them.

1. The Subcommittee on Mental Health feels that there is a need for mobile or "circuit" clinics to serve small communities where permanent mental health clinics have not been, and probably never can be, established. The real difficulty is a shortage of psychiatrists and other trained personnel, rather than of money. One-day institutes on emotional problems in children are being conducted in the schools, and every teacher should receive an indoctrination through this medium that may result in improved case finding. Therapy, of course, is another matter.

Alcoholism is a real medical problem in this state, and Iowa is one of only three states that have failed to recognize it as such.

2. The hospitals' maternal and child-care institutes for mothers have been poorly supported by local doctors.

3. Limited funds for the State Department of Health have curtailed the use of one mobile unit in the tuberculosis X-ray program. There has been some talk of combining the case-finding activity in tuberculosis control with that of some other group, such as the Cancer Society. The T-B X-ray program has discovered some early cases of cancer of the lung.

4. School health problems are at present being handled by the State Department of Public Instruction, by the federal Food and Drug Division, and by the federal Department of Agriculture (school lunches). Physician participation in local school health programs is needed as is legislation at the state level.

5. The Iowa society for licensed nursing homes is most grateful for the help given its educational program by many physicians. The (judicial) Council has approved of the Society's having a liaison committee with that group. The project is still in the formative stage.

More nursing-home inspectors are needed, for at present the State Department of Health has only three to cover 800 nursing homes, containing 18,000 patients.

The care-and-keep homes may need licensing and inspection. County and city boards of health should be encouraged to take the initiative in this work.

Legislation to set up a Commission on Chronic Illness is needed. The Society, through its Subcommittee on Chronic Illness, is supporting such a movement.

6. The manual prepared by the Subcommittee on Industrial Health is about ready for issuance. The cooperation of the Iowa Manufacturers Association has been requested for its distribution, and for the conducting of some industrial health institutes in various centers throughout the state. The Subcommittee on Rehabilitation will assist in those institutes.

7. New air-pollution problems are being studied. The Iowa Engineering Society has pointed out new problems, such as sanitation along the highways.

8. Interpretation of *rehabilitation*, as the term is used in new federal grants in aid, is being attempted. Also, existing facilities are being surveyed.

9. The Subcommittee on National Health Associations is cooperating with the "Heart of the Home" program for physically handicapped housewives, and with a similar program designed to benefit the cardiac farmer. Likewise, it is working with various national health organizations such as NFIP, ACS, etc.

10. The Subcommitte on Rural Health is rating and assisting communities that are seeking to obtain physicians, and is providing a clearing house where physicians may learn of possible openings for practice.

During the year, a great deal of work has been done on these problems, both in separate subcommittee meetings and in joint ones. The following reports will serve as evidence of the solid groundwork that is being laid for future projects, and to the splendid accomplishments that are already taking place.

ELMER A. LARSEN, M.D., *Chairman.*

SUBCOMMITTEE ON CHRONIC ILLNESS

After reviewing the subject, the members of the Subcommittee on Chronic Illness agreed that physicians are only one of many groups interested in the solution of this complex problem. Dr. Gelperin had reported on a survey of chronic illness in Polk County which pointed up not only the vast proportions of the problem, but also the multiplicity of agencies that are needed to care for the chronically ill. Further, in agreement with the Iowa State Commission on Chronic Illness, whose members were appointed by the governor with a representative of the ISMS as chairman, the Subcommittee concluded that the care of such patients should be the responsibility of the state government, rather than of any particular group or groups.

The first step in setting up a program of state sponsored and financed care for the chronically ill, quite obviously, is the establishment and subsidization of a study commission patterned after the one now functioning in Minnesota. The Iowa General Assembly must be persuaded to take that action.

When the Subcommittee had voted to formulate a resolution like Minnesota's and to have it presented to the legislature, the chairman met with the ISMS Legislative Committee to ask which representatives and senators should be approached initially. The Legislative Committee suggested that the script be revised to comply with the "joint resolution" pattern, and that it then be resubmitted for its approval. The Legislative Committee said that it would then pick legislators in both the House and Senate to sponsor it. That procedure was followed. One of the legislators, it seems, has undertaken to re-revise the resolution, but in its final form it will accord with the Subcommittee's wishes.

Last fall, the Iowa Nursing Home Association held a refresher course for its members under the sponsorship of Drake University. The chairman of this Subcommittee, Drs. D. A. Glomset, of Des Moines, D. D. Harris, of Marshalltown, and Stephen Horvath, of Iowa City, were among the speakers. The course was well attended, and the members of the Association exhibited considerable interest in methods for improving their service.

Dr. Glomset has suggested that the Subcommittee inform Miss Marguerite Slaught, president of the Iowa Nursing Home Association, that it is willing to assist her organization in setting up a program for another refresher course this summer, and the Subcommittee has agreed to do so.

W. D. PAUL, M.D., *Chairman.*

REPORT OF SUBCOMMITTEE ON REHABILITATION

Rehabilitation is the act of restoration to former rights, privilege, esteem or the like. Rehabilitate, according to Webster means "to restore to a former capacity; to restore to public respect." This definition applied to persons disabled by disease or injury implies a broad effort in behalf of the handicapped. Therefore, a broad concept of rehabilitation must be envisioned. This committee would like first and foremost to offer the following definition.

"Rehabilitation is the whole process by which an individual, disabled by disease or injury, obtains maximum opportunities for self care and gainful employment in the shortest possible time. Rehabilitation is understood to include complete medical and surgical care, physiotherapy, occupational therapy, vocational training and job placement help. It also includes social services to help alleviate family distress or indicated psychologic guidance as needed to maintain

mental perspective." In short, "rehabilitation means the restoration of any patient to self-sufficiency or to gainful employment at his highest attainable skill in the shortest period of time."

This concept, if followed, makes it clear that no specialty or modality has a monopoly hold on the rehabilitee, but rather it emphasizes the size of the team whose efforts are directed toward one goal of total rehabilitation. A recommendation of this committee is therefore that all doctors, all agencies cooperating in the rehabilitation effort, and the people of all communities be educated to this concept. Your committee will stand ready to consult, cooperate and actively help in the total organizational pattern of rehabilitation wherever it pertains in Iowa. To this purpose contacts will be made with interested agencies such as Public Health officers, Vocational Education office, the Farm Bureau, etc. Specifically for doctor education a brochure is contemplated which will provide information relative to the existing rehabilitation facilities in the state as well as helpful guides to the use of physiotherapy and occupational therapy in the office, the home or rehabilitation center. The public could have rehabilitation explained through the media of a scheduled live T.V. broadcast planned by the State Society.

Through such means this committee hopes that the time will come when all who are interested in rehabilitation will speak a common language, have a united goal and share the responsibility for the handicapped. Upon acceptance of the recommendations herein and subject to approval, your committee stands ready to implement the suggested actions.

Carroll B. Larson, M.D., *Chairman.*

REPORT OF THE SUBCOMMITTEE ON MENTAL HEALTH

The Subcommittee on Mental Health held three meetings during the year as a committee and met once with the Iowa Society for Mental Health. At this latter meeting the financial statement of the Society and its objectives were presented. The committee felt the Society might well draft its program with emphasis on emotional disturbances in preschool children, children in the primary stage of education, and teen agers. The feeling of the group was that the Society must have a definite program and technics to develop it. Several members of the Mental Health Committee agreed to serve as advisors and on the Board of the Society if elected at the annual meeting.

During the year the Committee started the monthly publication of a column on some phase of mental health. This is to be prepared by members of the Committee and other psychiatrists in the state and is to appear each month in the Journal of the Iowa State Medical Society.

Plans were made for including some mental health programs on the television schedule for 1955.

The chairman of the Committee attended the meeting of the American Medical Association Committee on mental health, and brought back a report to the state group.

The Committee felt new legislation on commitment laws was necessary and this was presented to the Legislative Committee of the State Society. The Committee also approved of legalizing the Iowa Mental Health Authority, of legislation authorizing a commission to study alcoholism, and legislation setting up a residential treatment center for emotionally disturbed children at Iowa City provided it was under the same control as the Psychopathic Hospital.

It was brought out at every meeting that there needs to be more dissemination of information on mental health to the other members of the medical profession. One reason for starting the Journal column was a desire to stress fundamentals and principles that can be utilized by most practitioners in looking after their own patients. It was also felt that it would be helpful to have a committee on mental health in every county medical society, and your State Society committee would like to recommend that this request be studied by all county societies and such a committee appointed where at all possible.

It is the hope of the members of the Committee that its work may be expanded in 1955; that the Journal column may teach general practitioners to recognize and treat the early symptoms of mental illness, and that a television program may educate the public that mental ill-health is an illness just as physical illness is.

John I. Marker, M.D., *Chairman.*

SUBCOMMITTEE ON NATIONAL HEALTH ASSOCIATIONS

At the State Medical Society offices in August, the Subcommittee on National Health Association held its only meeting of the year. Drs. Floersch, Galinsky, and Spear were present, in addition to the chairman.

Members of the Subcommittee have worked during the year as advisors in their particular fields of interest, heart disease, poliomyelitis and tuberculosis, as problems arose in those fields. Some of them worked with the Iowa tuberculosis control program that is carried on jointly by the Iowa State Department of Health and the Iowa Tuberculosis and Health Association. They offered their services both in an advisory capacity, in program planning, and in the field, in organizing and conducting certain newer programs of tuberculin testing and follow-up of non-hospitalized, active cases of tuberculosis.

Since the State Medical Society's Subcommittee on Poliomyelitis was organized only last April, it consulted the pre-existing Gamma Globulin Committee regarding problems associated with the Salk Polio Vaccine Field Trials, in Woodbury, Linn and Scott counties. Those programs had been organized prior to the formation of the new Subcommittee.

Similarly, members of the Subcommittee who are interested in heart diseases worked with the medical committee of the Iowa Heart Association on that organization's project for prevention and control of rheumatic fever.

Ralph H. Heeren, M.D., *Chairman.*

THE COMMITTEE ON RURAL HEALTH

For the year of 1954-55 this Committee was increased from four to eleven members, one being chosen from each Councilor District. This was accomplished in order better to evaluate the Medical needs of all of the rural areas of the State. The objectives of the Committee have remained as they were during the previous two years of its existence:

to aid in every possible way in providing excellent medical care to the rural residents of Iowa.

Physician placement and distribution has continued to occupy the primary position in our activities. Communities requesting physicians have been evaluated, and have been classified according to the urgency of their needs. Members of the Committee have visited many of these communities and have conferred with their civic leaders. In many instances recommendations have been offered to aid in attracting a physician. Forty-three communities have been aided in obtaining a doctor during the past year.

Effort is being exerted to attract more physicians into rural locations. Members of the Committee talked to the senior class of the College of Medicine last Spring, presenting the advantages of general practice. A similar meeting is being planned for this year. This project is being integrated with the preceptor program. Incidentally, nearly every member of the Committee serves as a preceptor.

In December the Committee met with Dean Norman Nelson of the College of Medicine. Discussion revolved around a proposal that members of the teaching staff of the College might be prevailed upon to pioneer a new type of postgraduate training in medicine. It has been suggested that the staff physicians go into a community for a period of seven to ten days as teachers of the practicing physicians in that locality. This would also give them an opportunity to observe the quality of the medicine being practiced, and the results of their efforts as college instructors. It might be desirable that they be the house guests of one of the general physicians in the community in a fashion similar to that now used in our preceptor program. The physicians of the State would benefit greatly from a program of this nature. It is believed that the staff physicians would profit from the experience also. A clear conception of the needs of their students who propose to enter general practice would aid them in molding an appropriate curriculum.

Three members of the Committee attended the Tenth National Conference on Rural Health in Milwaukee, Wisconsin.

BRUCE F. HOWAR, M.D., *Chairman.*

COMMITTEE ON PUBLIC RELATIONS

The Committee on Public Relations has concentrated upon two phases of its problem during the past year. In order more satisfactorily to indoctrinate new members of the Society, an attempt was made at getting them together for a day-long conference, to give them information relative to the functions of the Society, its purposes and its methods of operation. In addition, the conference was to have been a means of calling their attention to various sins of omission and commission that are likely to result in public relations problems for them as individuals and for the profession of medicine. The program presented on September 23, 1954, was excellent, but the attendance was poor, and the results were debatable. Though 150 physicians had been expected, only about 24 attended.

The other project in which the Committee has engaged concerns the improving of the Society's setup for keeping in touch with member physicians and with the public. In connection with and in consequence of the physician-hospital controversy, the special meeting of the House of Delegates, December 12, 1954, empowered the Committee to go ahead with the establishment and staffing of a Public Relations Department at the Society headquarters. The House recommended that the individual hired to run that new Department should cooperate with and work under the direction of the executive secretary, the Public Relations Committee, the president, and the Board of Trustees.

That program is now being put into operation, though not to its fullest extent and only in a temporary manner, by borrowing personnel from Blue Shield, in the person of Mr. Wilbur R. Quinn. An outline of the program has been made, sufficiently long-range in viewpoint, and it will be put into operation in the near future. Successive facets of the program will be activated as the Department becomes better and better established.

The physician-hospital controversy has necessitated the side-tracking of some attention that might otherwise have been concentrated upon the expansion of activity that has just been described.

OTTO N. GLESNE, M.D., *Chairman.*

SUBCOMMITTEE ON INTERPROFESSIONAL ACTIVITIES

The Subcommittee has cooperated with allied health organizations, but more especially with members of the Iowa Interprofessional Association, in an effort to improve relations between groups interested in health and also to improve public health in general.

The Society assisted in arranging 8 district interprofessional meetings which were held throughout Iowa last fall. The Society's office staff handled the preparation and mailing of the announcements of these meetings.

On February 9, 1955, the committee was host to representatives of the Iowa Pharmaceutical Association at an afternoon meeting held in the office of the Iowa State Medical Society. This joint meeting was arranged on request of the I.P.A. to discuss mutual problems of the two organizations.

The major problems discussed by the two committees were (1) Drug dispensing physicians (2) counter prescribing pharmacists and (3) clinic-owned pharmacies. It was the consensus of the entire group that both state organizations should make a concerted effort to inform their members of their obligations to adhere to the ethics of their respective groups insofar as the problems cited above are concerned. Each group has decided to send out information to members outlining the sections of their respective codes of ethics which relate to the relationship between doctors and pharmacists.

The committee anticipates more activity in the future than it has experienced in the past. We believe that a good relationship with allied professional groups is extremely important to the health of the people of Iowa.

F. M. BURGESON, M.D., *Chairman.*

SUBCOMMITTEE ON MEDICAL PRESS AND RADIO RELATIONS

Because the major problem during the past year has been the hospital-physician controversy, the radio and press relations have been maintained through the central office of the Iowa State Medical Society.

ROBERT B. STICKLER, M.D., *Chairman.*

COMMITTEE ON HEALTH EDUCATION

The Committee on Health Education has been active in television, radio, newspaper and Speakers' Bureau work during this past year.

It has been producing a weekly television program (Fridays, 9:30 p.m.) over WOI-TV, in Ames, entitled "Your Health," on which numerous subjects have been covered. From January 1, 1954, to April 23, 1954, thirteen programs were presented. During the summer, work was done on the next series of thirteen programs, which were scheduled from September 17, 1954, through December 10, 1954. Because of previous commitments made by the station, the next series of programs will not begin until the latter part of April, 1955.

A survey was taken on the night of October 8, during the program "Pathology," and the results were very gratifying. The rating assigned to the program, 18.5, is considered above average and very good. The rating means that 86,210 persons were watching it. Since the survey was taken early in the series, we are inclined to believe that even larger numbers of people watched as the series progressed.

Kinescopes (16mm. films) were made of the thirteen programs, and they are now being shown every other Sunday at 5:30 p.m. over station KGLO-TV, in Mason City. We hope to have these films shown over every television station in the state, and are now working toward that goal.

The Committee's radio health programs are broadcast over WOI, in Ames, on Thursdays at 11:15 a.m., and over WSUI, in Iowa City, on Tuesdays at 11:45 a.m. The programs are on platters sent to the Society by the American Medical Association. Each program is fifteen minutes long, and there are thirteen programs in a series.

The Committee has continued publishing a series of bi-monthly articles in WALLACE'S FARMER, and to date 32 articles have appeared.

The Speakers' Bureau secured speakers for five county medical society meetings and three lay meetings. Seven of our doctors are scheduled to speak at lay meetings in the near future. The Speakers' Bureau also helped set up the program and secured the speakers for the Webster County Postgraduate Course which was held in Fort Dodge last fall. There were five evening meetings.

When requests for speakers are sent to the Speakers' Bureau, a speaker is sent out who is qualified on the subject that the group wishes discussed. An attempt also is made to send out a doctor who has to travel as short a distance as possible to address the particular group.

In 1955, plans are being made to expand the Speakers' Bureau services to county medical societies and lay organizations.

ROBERT B. STICKLER, M.D., *Chairman.*

Reports of Special Committees

BALDRIDGE-BEYE COMMITTEE

Since, by the direction of the governing authorities of the Iowa State Medical Society, the funds of the Baldridge-Beye Loan Fund have been diverted to purposes other than loans for needy students, there has been nothing for this Committee to do. No applications for loans have been received, and no loans have been made.

Now that another student loan fund, fostered by Dr. George Scanlon, of Iowa City, has the official sanction of the Society, I can see no reason for the continued existence of the Baldridge-Beye Committee, of which I have been chairman.

I feel, however, that every member of the Society should be made aware that the money he pays each year into the Baldridge-Beye fund through his dues has been diverted to other uses and is being made a part of the funds of a state supported medical school. Though without a doubt that new use is worthy, very few members know what that institution is doing with that money.

J. W. AGNEW, M.D., *Chairman.*

OSTEOPATHIC COMMITTEE

The Iowa State Medical Society's committee on the osteopathic problem has had an interesting and informative year. Many meetings were held during the late spring, summer and early fall of 1954, but later in the year, other Society activities, together with the Cline Committee's failing to complete its inspection of osteopathic schools and consequent inability to report to the House of Delegates at Miami in December, pushed this Committee's concerns into the background.

Still College of Osteopathy invited Dr. Cline's Committee to make an inspection; the invitation was accepted; and the visit was made during February, 1955.

Relations between the officials of Still College and your (State Society) Committee have been cordial during this year, and the members were invited to look over the physical plant of the College last summer during vacation when the students were absent. That visit was interesting, but not greatly informative, except in a loose, general way. Your Committee was unanimous in one opinion, that the head of the school, Dr. Peters, is a very dynamic individual and doubtless is an excellent salesman for osteopathy.

The officials of the Osteopathic Society of Iowa have shown increasing interest in mutual problems of the two societies and on several occasions have expressed a desire for cooperation with us. These offers have all been closely inspected, and a few have even appeared to be to our advantage. But no action has been taken, for obvious reasons of ethics.

JOHN D. CONNER, M.D., *Chairman.*

SUBCOMMITTEE ON NATIONAL EMERGENCY MEDICAL SERVICE

The Subcommittee feels that the medical profession, through the State Society and its component county groups, must assume leadership in planning for disaster and civil-defense medical service. Without this voluntary leadership, no soundly based and ready service will be available in any community where disaster of any type happens to strike. It is the physicians' duty to assume this responsibility in order that the people of our communities may be protected.

The Subcommittee also wishes to impart a sense of very real and extreme urgency. Many communities have no disaster plans at present, and to the ever-present chance of natural disaster or accident, we must add the possibility of warfare, from the effects of

which we are no longer isolated. Planning for disaster, which was always wise, is now mandatory and must not be delayed.

We find that in only a few communities where disaster has recently occurred, has there been any planning done and action taken to implement such plans. In accordance with usual human traits, other communities have lapsed into a complacency from which they must now be awakened. It is the opinion of the Subcommittee that the first step, one to be undertaken immediately, is the initiation of an educational program, both lay and professional.

The Subcommittee would like to make several concrete suggestions:

(1) We strongly urge that a physician be sent to the course on "The Medical Care of Atomic Casualties," in Washington, D.C., and that he subsequently be used as a speaker in our educational program.

(2) We suggest that county medical societies, or meetings of councilor-district groups when the latter seem more feasible, be requested to devote a session to matters of disaster medicine, and that the State Society give every aid in obtaining qualified speakers. Some of these are available locally, from such institutions as the Burlington Ordinance Plant.

(3) We feel that the medical societies should aid lay organizations in obtaining speakers in disaster medical planning and in civil defense.

(4) We understand that tentative plans have been made to obtain a speaker for the annual meeting of the State Medical Society who will discuss disaster medicine.

Although we are in need of an educational program, a start at planning cannot wait upon its completion. Of all the things which might be done now, the one most important seems to be the formulation of Standard Plans for Evacuation. These plans entail provision, first, for the care of the sick and the injured, and second, for safeguarding the health and well-being of migrating populations.

The problems involved are stupendous. Consideration must be given to the establishment of temporary evacuation hospitals, organization of medical teams, movement of medical supplies, provision of ambulances, and attention to public health matters such as the prevention of epidemics, water discipline, and disposal of wastes. The above are examples of a list which could be extended almost indefinitely. Along with these, we must consider traffic control, feeding, police supervision and other non-medical matters.

Since these problems are all closely related, no one group can plan for them all. Therefore, the Subcommittee believes it necessary to meet with similar groups from other agencies, such as the State Department of Health and the Iowa Civil Defense Commission. Plans for the first such meeting are under way.

ROBERT C. HARDIN, M.D., *Chairman.*

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Advisory Committee to the Woman's Auxiliary has worked very closely with the Woman's Auxiliary officers through the year. The Advisory Committee has appreciated the opportunity to cooperate with the Woman's Auxiliary in the development and implementation of its program. The Committee is fully cognizant of the value of organized auxiliary units and the value they have in maintaining good intra-professional relations as well as good public relations.

The Woman's Auxiliary committee charged with the responsibility for promoting the sale of the AMA magazine TODAY'S HEALTH has worked very hard to meet its quota. On December 31 the committee had accumulated 527 points on its 889 required quota with four months remaining to work. The Iowa State Medical Society's Woman's Auxiliary national rating on the sale of TODAY'S HEALTH was increased markedly over the year.

The Nurse Recruitment and Loan Fund Committee has done outstanding work on this project with over 1000 girls asking for literature. Thirty-six active Future Nurses Clubs organized in high schools throughout the State are an important and excellent approach to recruitment of nurses. Five girls are receiving loans from the Woman's Auxiliary Loan Fund, with $3565 in commitments. Two girls graduated in 1954 and are rapidly repaying loans as a result of excellent positions in the nursing field. The Iowa State Medical Society's Woman's Auxiliary Loan Fund has been set up through assessment of 50 cents per auxiliary member plus memorial contributions.

The Committee on Handicapped Work assists the Iowa Society for Crippled Children and Adults by providing volunteer help for sales of articles made by handicapped people througout the State. This committee has conducted sales in Ft. Dodge, Sioux City, Dubuque, Waterloo, Burlington and Des Moines.

District Meetings have been held or are scheduled for all districts by the Woman's Auxiliary councilors.

There are other projects in which the Auxiliary has taken an active interest, but too many for me to attempt to report on in this summary.

L. A. COFFIN, M.D., *Chairman.*

SUBCOMMITTEE ON NURSING EDUCATION AND NURSING SERVICE

This Subcommittee has held no meetings during the present fiscal year. The members have carried on some correspondence with one another, however, and a great deal of data has been accumulated.

Though no further report can be made at this time, it is hoped that one will be ready for oral presentation at the annual meeting.

E. P. LOVEJOY, M.D., *Chairman.*

HISTORICAL COMMITTEE

The Historical Committee feels a responsibility to future generations to record medical history through the early years of the '70s and '80s. It is more important to record accounts of those decades than of the ones since then, for when the *second* hundred years of Iowa medicine are recorded, there will be an abundance of material from which to glean.

Interested though they are in the miraculous scientific developments of the past 50 years, those Iowa physicians yet living who have memories of the latter decades of the nineteenth century should not fail to make their contributions toward completing the records, so that the adventures and accomplishments of the pioneers in Iowa medicine may not be lost.

About one third of the Iowa counties have no written medical histories. Obtaining these, with emphasis upon the accomplishments of the two decades already mentioned, is desirable.

CLYDE A. HENRY, M.D., *Chairman.*

COMMITTEE ON MEDICAL PRACTICE IN HOSPITALS

The Committee on Medical Practice in Hospitals has attempted to keep the members of the Society informed on all of its activities and on the physician-hospital problem. Since last April, it has sent out news bulletins about once a month, and in addition, the members of the Committee and/or the officers of the State Society have appeared before county and district meetings to discuss the Society's position in the matter.

As far as the settlement of the problem is concerned, however, the Committee has very little to report. Its members have conferred on numerous occasions with the officials of the Iowa Hospital Association, but, each time, the IHA representatives have rejected the proposals for settlement offered by the physicians.

Because of those repeated refusals of the IHA officials to settle this problem at the state level, we believe that continued attempts to settle the disagreement through meetings of our respective committees would be fruitless.

It has always been the position of the ISMS that the problem should be settled locally, but little progress in that direction has been possible because the IHA instructed member hospitals last spring not to enter into local agreements.

The physicians of this state can be sure that their Committee on Medical Practice in Hospitals has done, and will continue to do, everything in its power to establish proper relations between physicians and hospitals. Further, they can be sure that it will do all in its power to maintain the Medical Practice Act in its present form. The Committee remains convinced that the Act, as written, provides proper protection for the people of Iowa.

No doubt it will be necessary for us to present a supplemental report on the floor of the House of Delegates. We hope, by then, to be able to inform doctors that the problem has been solved to the satisfaction of all concerned.

Walter D. Abbott, M.D., *Chairman.*

SPECIAL COMMITTEE TO STUDY GROUP INSURANCE

This year, the Special Committee to Study Group Insurance has considered proposals that approximate or comply with our specifications for benefits. Those proposals have been presented by almost all of the good companies and administrators dealing in this phase of insurance. Plans that were limited as regards benefits were not considered.

Several meetings have been held to review and discuss the varying characteristics of the outlined plans. One large meeting was held last fall, at which representatives of the companies were allowed to present details relating to their proposals and to answer questions. The Committee was augmented for that session by Miss McCord, Mr. Taylor, Dr. R. F. Birge, Dr. M. I. Olsen and Mr. I. W. Myers.

Special features involving Iowa State Medical Society policy or procedures were presented to the Executive Council for its ruling.

It is the plan of the Committee to have a definite recommendation as to the most desirable plan, company and administration ready for presentation at the time of the 1955 annual meeting.

George G. Young, M.D., *Chairman.*

PUBLICATION COMMITTEE

The 1954 JOURNAL continued with the presentation of articles delivered at the annual meeting of the Society, together with case reports contributed by Iowa physicians. Because somewhat increased numbers of the latter have been available, the average number of scientific papers in each issue has been increased from four to five, in addition to the clinical pathologic conference report that is a regular feature. The Society's Subcommittee on Mental Health, together with the staff of the Psychopathic Hospital at SUI, has begun supplying the JOURNAL a series of short articles that constitute a considerable addition to its scientific content. And through the printing of one-page discussions of business details of medical practice, contributed by Mr. Millard K. Mills, of Professional Management, the JOURNAL has entered the medical economics field. Quite recently, the calendar of coming postgraduate education courses and meetings in Iowa and surrounding states has begun appearing regularly.

Employing an artist, on a piecework basis, has enabled the editors to introduce some decorative headings into the magazine and to improve the appearance of the charts and diagrams that illustrate many of the scientific articles. Furthermore, a start has been made toward using color, in addition to black, in printing some of the pages of the magazine. That brightening-up process is expensive, but the costs are being met through the collection of premiums for certain preferred advertising pages.

	1952	*1953*	*1954*
Reading Pages	604	534	662
Advertising Pages	444	406	464
Percentage of Reading Pages	57.6	56.8	58.8
Original Articles	71	69	69
Editorials	60	68	69
Total Journal Expenditures	$27,706.28	$25,475.40	$29,040.94
Total Journal Income	$20,173.56	$19,039.62	$21,329.19
Number of State Society Members	2,489	2,481	2,485
Net Expenditure per Member	$3.03	$2.58	$3.10

Though the figures relating to the JOURNAL in the Treasurer's Report do not, the above statements regarding expenditures include the salaries and proportionate shares of salaries of the staff members who edit and publish it.

E. M. George, M.D., *Editor.*

The speaker then called for supplemental reports of officers. Officer reports were presented by the secretary, by the Board of Trustees, and by the senior delegate to the American Medical Association.

Following the introduction of officer reports, the four representatives of the Student AMA from the State University of Iowa were introduced. There followed a report by Dr. George H. Scanlon on the status of the Iowa State Medical Society Education Fund.

Dr. Gerald V. Caughlan, president, on being asked by the speaker to address the House, called to the attention of the delegates that he would give his formal address before the general session on Monday, and acknowledged the fine attendance at this session of the House of Delegates.

Dr. Lonnie A. Coffin, president-elect, was introduced. He greeted the delegates and acknowledged the assistance he had received from Dr. Caughlan and others during his year of preparation to assume the office of president.

The next order of business was the supplemental reports of standing committees. Supplemental reports were presented on behalf of the following: Legislative Committee, Necrology Committee, Committee on Articles of Incorporation and Bylaws, Subcommittee on Insurance, Industrial Health Committee, Public Relations Committee, and Subcommittee on Health Education.

The report of the Committee on Maternal and Child Health was not presented before the House of Delegates on Sunday because of the late arrival of the chairman. For that reason, and since the report contained considerable important information, the speaker referred the supplemental report to a reference committee, and then it was read in its entirety in the House of Delegates on Wednesday under old business.

Supplemental reports from the following special committees were presented: Osteopathic, National Emergency Medical Service, Nursing Education and Service, Historical, Medical Practice in Hospitals, Group Insurance.

Next, the speaker called for memorials and communications. Dr. Caughlan asked for the privilege of the floor and introduced a resolution requesting the House of Delegates to approve sending a message to Dr. C. A. Boice, Washington, vice president, regretting his absence from the House of Delegates because of illness and wishing him a speedy recovery. The motion unanimously carried.

Under new business, the House of Delegates approved life membership for 42 physicians.

On the basis of fifty years practice and thirty years membership:

County	*Physician*
Black Hawk	Charles W. Ellyson, Waterloo
Buchanan	Benjamin B. Sells, Independence
	Harold A. Housholder, Winthrop
Buena Vista	John W. Morrison, Alta
Carroll	Amos W. Carlile, Manning
Cedar	Paul M. Hoffman, Tipton
Clay	Emery A. Rust, Webb
Clinton	Kurt Jaenicke, Clinton
Fremont	Leon A. Baldwin, Riverton
Grundy	Hugo V. Kahler, Reinbeck
Jackson	Frank L. Griffin, Baldwin
Linn	David E. Beardsley, Cedar Rapids
	Roy K. Keech, Cedar Rapids
	James M. Knox, Cedar Rapids
Marion	John F. Gray, Melcher
Marshall	Grove W. Harris, Marshalltown
	Wm. A. Kauffman, Marshalltown
	Arthur R. Lynn, Marshalltown
	Earl H. Noble, Clemons
Polk	Clifford W. Losh, Des Moines
	Arthur E. Merkel, Des Moines
Union	Alexander S. Beatty, Creston
Wapello	Edwin A. Nash, Ottumwa
Woodbury	Jay C. Decker, Sioux City

On the basis of disability:

County	*Physician*
Appanoose	Walter E. West, Centerville
Boone	Ross E. Gunn, Boone
Clay	Andrew G. Larson, Dickens
Dallas-Guthrie	Samuel T. Foster, Adel
	Orville J. Pennington, Dexter
	Charles E. Porter, Redfield
Dubuque	Frederick S. Leonard, Dubuque
	Howard E. Thompson, Dubuque
Henry	Frank R. North, Winfield
Howard	Charles S. Stoakes, Lime Springs
Mahaska	Francis A. Gillett, Oskaloosa
Marshall	William B. Mantle, Albion
Montgomery	George W. Egermayer, Elliott
Osceola	Eerko S. Aeilts, Sibley
Polk	Thaddeus A. Minassian, Des Moines
	Floyd W. Rice, Des Moines
	John T. Strawn, Des Moines
Worth	Gabriel S. Westly, Manly

Nominations for the general practitioner award were requested. Only one physician was nominated—Dr. E. J. Watson, Diagonal. His nomination was made by Dr. Harold J. Peggs, Creston, councilor for the Tenth District.

Resolutions were introduced from the following: one each from the Johnson, Pottawattamie, Davis and Dubuque County Medical Societies, two from the Scott County Medical Society, three from the Union County Medical Society, and one from the Fifth Councilor District.

Reports of officers, supplemental reports of standing and special committees and resolutions were referred to the reference committees appointed by the speaker.

The speaker called for a 15-minute recess to make it possible for delegates from the various districts to caucus and select members to serve on the Nominating Committee. The members chosen for the Nominating Committee were Drs. M. J. McGrane, Jay E. Houlahan, Thomas L. Ward, Harold E. Farnsworth, John D. Conner, D. Dale Harris, Thomas M. Redmond, L. C. Pumphrey, Edward B. Hoeven, Harold J. Peggs, and C. V. Edwards.

There was a delay in the presentation of the report from the special Medical Society-Blue Shield Study Committee due to the absence of the chairman, but this report was presented by a member of the committee in this order of business, so that it could properly be referred to a reference committee.

The speaker instructed the chairmen of the various reference committees on the method which they should follow in preparing their final reports for presentation to the House of Delegates on Wednesday. He then announced the times and places of the reference committee meetings.

He also requested the delegates to take registration cards with them to be completed and handed in as they entered the House Wednesday morning.

The House was adjourned at approximately 5:30 P.M.

WEDNESDAY MORNING SESSION

APRIL 27, 1955

The Wednesday morning session of the House of Delegates was called to order at 7:30 A.M. Roll call was taken by registration cards. Eighty-two delegates and 18 alternates were seated.

County	*Delegate*	*Alternate*
Allamakee		J. W. Thornton
Appanoose	E. A. Larsen	
Audubon	H. K. Merselis	
Benton	J. E. Blumgren	

Black Hawk	C. D. Ellyson	
	T. L. Trunnell	
	R. C. Miller	
Boone	R. L. Wicks	
Bremer	O. C. Hardwig	
Buchanan		P. J. Leehey
Buena Vista	H. E. Farnsworth	
Carroll	J. M. Tierney	
Cass	R. H. Moe	
Cerro Gordo	H. G. Marinos	
	J. E. Houlahan	
Cherokee		J. H. Wise
Clarke	H. E. Stroy	
Clay		D. H. King
Clinton	R. F. Luse	
	V. W. Petersen	
Dallas-Guthrie	W. A. Castles	
Delaware	R. E. Clark	
Des Moines	F. G. Ober	
	E. P. Russell	
Dickinson		T. L. Ward
Dubuque	R. J. McNamara	
	P. J. Laube	
	D. C. Conzett	
Floyd	G. T. Grimmer	
Franklin	R. E. Munns	
Greene	L. C. Nelson	
Grundy	H. V. Kahler	
Hamilton		G. A. Paschal
Hardin	L. F. Parker	
Harrison	A. C. Bergstrom	
Henry	J. S. Jackson	
Humboldt	T. G. Herrick	
Jasper	J. W. Billingsley	
Jefferson	R. A. McGuire	
Johnson	E. J. Boyd	
	R. H. Flocks	
	J. S. Greenleaf	
	L. H. Jacques	
		J. M. Layton
	E. F. Van Epps	
	S. C. Ware	
	G. C. Albright	
Jones	T. M. Redmond	
Lee	L. C. Pumphrey	
Linn	C. H. Stark	
	J. J. Keith	
	J. J. Redmond	
		E. H. Files
Lucas	A. L. Yocom	
Madison	P. F. Chesnut	
Marion	H. L. Bridgeman	
Marshall	D. D. Harris	
Montgomery	Oscar Alden	
Muscatine		K. E. Wilcox
O'Brien	Hugh LaMaster	
Osceola	F. B. O'Leary	
Page	P. L. Spencer	
Plymouth	W. L. Downing	
Pocahontas	J. B. Thielen	
Polk		O. E. Elliott
	F. C. Coleman	
	T. A. Bond	
		W. M. Sproul
	J. T. McMillan	
	G. E. Mountain	
	N. W. Irving	
	B. M. Merkel	
	D. C. Wirtz	
		D. H. Kast
		W. J. Morrissey
Pottawattamie	C. V. Edwards	
		H. W. Mathiasen
Poweshiek		S. D. Porter
Ringgold		E. J. Watson
Sac	W. I. Evans	
Scott	J. F. Bishop	
	J. H. Sunderbruch	
	P. E. Gibson	
Shelby	J. H. Spearing	
Sioux	M. O. Larson	
Story	G. E. McFarland, Jr.	
	J. D. Conner	
Tama	C. W. Maplethorpe, Sr.	
Union	H. J. Peggs	
Van Buren	J. T. Worrell	
Wapello	W. C. Wolfe	
	E. B. Hoeven	
Warren	L. E. Hooper	
Webster	C. J. Baker	
	H. H. Allen	
Woodbury	P. D. Knott	
		C. T. Maxwell
	F. D. McCarthy	
Worth		W. G. McAllister
Wright	G. E. Schnug	

The House approved the minutes of the Sunday meeting of the House of Delegates.

ELECTION OF OFFICERS

The Speaker then called for the report of the Nominating Committee, following which report, the delegates elected State Society officers as follows: President-Elect, Wendell L. Downing, LeMars; Vice President, Walter D. Abbott, Des Moines; Trustee, Ernest M. Kersten, Fort Dodge; Speaker of the House, Herman J. Smith, Des Moines (re-elected); Vice Speaker of the House, Thomas F. Thornton, Waterloo (re-elected); Delegate to the AMA, Donovan F. Ward, Dubuque (re-elected); Alternate Delegate to the AMA, Frank G. Ober, Burlington (re-elected); Councilors, Arthur F. Fritchen, Decorah (re-elected); Paul W. Brecher, Storm Lake (re-elected); S. Dale Porter, Grinnell; Charles H. Flynn, Clarinda; Bruce F. Howar, Webster City (elected to fill the unexpired term of Dr. Ernest M. Kersten).

Reports of Reference Committees (Summary)

ARTICLES OF INCORPORATION AND BYLAWS

Significant changes in the Articles of Incorporation and Bylaws, as recommended by the Standing Committee and by the reference committee, and as approved by the House of Delegates follow:

1. The Council, as the body composed of the eleven district councilors has heretofore been known, will now at all times be identified as the Judicial Council. This change in the Articles of Incorporation and Bylaws was made to differentiate the Judicial Council from the Executive Council. There has been some confusion in the past as to the respective responsibilities of these two groups. The Executive Council has the policy-making authority of the House of Delegates between sessions of the House of Delegates, whereas the responsibility of the Judicial Council is primarily judicial and organizational.

2. Membership in the Iowa State Medical Society is now subject to final approval by the Judicial Council.

3. Life Members. Any physician who has practiced medicine for 50 years and has been a member of the State Society for 30 years may be elected to life membership by the House of Delegates. It is now stipulated in the amended articles that the date of graduation from medical school shall be considered the date of entry into practice.

4. Associate Members. This is a new membership designation which shall be given on authority of the House of Delegates to a member or former member provided that he has retired or is incapacitated to such an extent that the payment of dues would be a hardship, and provided that his county society votes to present his name for such associate membership in the State Society. Such members shall be exempt from payment of dues, but shall receive the publications of the State Society. They shall not have the right to vote or to hold office.

Other changes in the Articles of Incorporation and Bylaws which were proposed by the Committee on Articles of Incorporation and Bylaws, and amended to some extent by the reference committee, were made to remove inconsistencies and to improve wording.

LEGISLATION AND PUBLIC RELATIONS

The supplemental report of the Committee on National Emergency Medical Service urged more phy-

sicians to become trained in matters pertaining to civil defense. It was recommended that the Society stand ready to aid the medical director of civil defense in Iowa in whatever way he requires, and that each member voluntarily associate himself with that organization. *Approved.*

The report of the Committee on Health Education informed the delegates of the State Society's television activity and called attention to the national television award which the Society's "Your Health" television series had received. *Approved.*

The Public Relations Committee report recommended employment of a young man with a background in journalism and/or public relations to handle public relations and field service. The committee also stressed importance of active county medical society public relations programs based on good press relations, doctor-patient relations, etc. *Approved.*

A Dubuque County Medical Society resolution called for wholehearted support of the Jenkins-Keogh Bill (retirement plan for self-employed professional men) now before Congress. *Approved.*

The following recommendation from the Reference Committee on Legislation and Public Relations was approved. "The committee recommends that individual county societies determine their own policies in school health programs on sound medical and economic bases and that the ISMS be governed by its Executive Council in policies concerning future overtures from national lay organizations." This recommendation was prompted by a resolution introduced by the Union County Medical Society which called for "establishment of a statement of general policy that no one single man in whatever office he holds in the society, be able to commit, or unduly influence the whole society without prior consultation with the house of delegates, or . . . the executive council or the judicial council or in certain cases a special committee especially delegated specific limited powers from one of the above representative bodies . . ."

INSURANCE AND MEDICAL SERVICE

The reference committee considered the reports of the Subcommittee on Insurance and of the Special Medical Society-Blue Shield Study Committee.

The reference committee recommended that until further study warrants such action, the ISMS oppose the development of a Blue Shield indemnity type policy. *Approved.*

The reference committee recommended that Blue Shield-Blue Cross not be separated because it would be uneconomical and because a sizable loss of subscribers to each plan would eventuate, since the public is showing an increasing inclination to buy hospital and medical coverage as package deal. *Approved.*

The reference committee subscribed to the portion of the Medical Society-Blue Shield Study Committee report which read: "We would recommend that Blue Shield have a more active Board of Directors and that the Board should have regularly scheduled and regularly attended meetings in a manner befitting a multi-million-dollar business." In keeping with the intent of this recommendation, the reference committee suggested the following method of selecting directors: "When a Director's term is about to expire, a slate of not less than three members be selected for this position by the delegates at their District Caucus during the annual session of the State Society. This designated slate would then be given to the proper Blue Shield administrator for vote by the participating physicians at the annual meeting of Blue Shield. It is further recommended that the physicians designated as Directors-at-Large be similarly selected by the Nominating Committee of the State Society at the time they make nominations for officers of the State Society." *Approved.*

The reference committee recommended that the Blue Shield Board give considerations to compensating those who are giving actuarial advice and counsel. *Approved.*

The reference committee recommended that the Blue Shield family full service limit remain at $3,600 a year for the present. *Approved.*

The reference committee recommended that an exhaustive study be made toward providing another separate full service Blue Shield policy embodying higher premiums, higher fees, and a top level coverage somewhere above the present limit, but that no such venture be introduced without careful study coupled with competent business advice. *Approved.*

The reference committee recommended the continuation of the special Medical Society-Blue Shield Study Committee or a committee of similar design augmented by qualified laymen to help further the Committee's report, admittedly only preliminary at the present time. The reference committee further recommended that this special committee be instructed to report directly to the Executive Council of the ISMS so that the implementation of policies may be accorded prompt action. *Approved.*

MISCELLANEOUS BUSINESS

The reference committee on Miscellaneous Business approved the supplemental report of the Osteopathic Committee with the following stipulation: that the delegates to the AMA from Iowa be uninstructed pending the outcome of the John Cline Report but also that they proceed cautiously in so far as the entire problem of osteopathy is concerned.

The House of Delegates approved the supplemental report of the Committee on Industrial Health which announced that a manual of directives for nurses in industry had been completed and was in the hands of the printer. The report referred to an industrial health survey which was conducted with Iowa physicians, and it expressed appreciation to the 966 physicians who took time to read the material and reply. It contained the statement that 461 physicians were doing some sort of industrial medicine, but 505 had said they were not. *Approved.*

The House of Delegates approved the report of the Committee on Maternal and Child Health which made reference to the development of a program for preventing the recurrence of rheumatic fever. The program is sponsored jointly by the Iowa Heart Association and the State Services for Crippled Children, and the purpose of the program is to provide penicillin for a one-year period to any medically indigent Iowa patient 21 years or under who has had rheumatic fever and whose physician requests that he be included in the program.

The House of Delegates approved the supplemental report of the Committee on Nursing Education and Nursing Service. The report announced that the Committee had discussed at some length the apparently permanent shortage of nurses, together with the

causes and possible means of correcting the shortage. The Committee felt that full cooperation between the ISMS, IHA and Iowa State Nurses Association is needed if this shortage is ever to be relieved. The Committee asked the Executive Council of the Society to consider the possibility of developing a joint committee with the IHA to review the entire nursing education system.

The House of Delegates approved a resolution introduced by the Johnson County Medical Society requesting the ISMS to support the position of the Judicial Council of the AMA on a report submitted to the Judicial Council from a joint committee composed of the Section on Ophthalmology of the AMA, the American Academy of Ophthalmology and Otolaryngology, and the American Ophthalmological Society. The Judicial Council had been asked to define medical ethics as regards the responsibility for both refraction and supervision of the dispensing of glasses.

The House of Delegates of the ISMS approved the following statement of the AMA Judicial Council presented to the House of Delegates of the AMA in December, 1954: "The Judicial Council has been asked on numerous occasions to define expressions not used in the Principles of Medical Ethics that connote unethical conduct. The Council does not believe it is appropriate to define such terms, because neither definition nor description determines the ethical nature of conduct. The principles themselves are the criteria by which the ethical nature of professional conduct is determined. Whenever it becomes necessary to evaluate the ethical quality of professional conduct, the answer is to be found in the principles, not in rules or definitions. Thus the Council bases its opinions and interpretations on the Principles of Medical Ethics rather than on extraneous definitions." The House of Delegates also approved the following provisions contained in the Johnson County resolution: "1. Ophthalmologists are subject to all the principles of medical ethics of the AMA. 2. Fee splitting, in any form, is unethical whether it be with a physician, optician, optometrist, or a firm engaged in furnishing instruments, drugs, apparatus, laboratory work, or roentgen ray examination for an ophthalmologist."

A resolution was introduced by the Scott County delegates duplicating the Johnson County Medical Society resolution concerning ophthalmologists. Because of the duplication, the reference committee rejected this resolution.

A resolution was introduced on behalf of the Pottawattamie County Medical Society calling for a change in the code of ethics of the ISMS relative to contract practice in medicine. The reference committee recommended, and the House approved, referring this resolution to the Judicial Council for study and action.

The reference committee had considered a resolution introduced on behalf of the 5th District which asked the House of Delegates to authorize the Secretary of the ISMS to keep a continuous annual record of attendance at all meetings by committeemen and officers and that on April 1 of each year copies of this record be made available to the president-elect for his review prior to selection of committee members, and that extra copies be available through the state office to any member of the ISMS. *Approved.*

A resolution from the Davis County Medical Society requested the House to establish as a permanent policy the system for selecting committee members from two names submitted by the county medical society for each delegate, which was a plan approved in 1954. The reference committee recommended that this plan be continued on a trial basis for one year. *Approved.*

REPORTS OF OFFICERS

The reference committee on Report of Officers reviewed the report of the Secretary and the Board of Trustees. The reference committee recommended approval of these reports, but in reference to the Secretary's report made the following comment: "The committee was struck by the fact that there are several counties in which the membership percentage is less than 70. It felt such county societies could not function effectively and should probably be combined with adjoining counties." The reference committee also said that it was obvious that the non-members in those counties were benefiting from the support given by the members and that the State Society officers should make an investigation of conditions in these counties to see whether something can be done to increase the membership.

GROUP INSURANCE

The reference committee agreed with the Committee on Group Insurance and recommended the selection of Commercial Insurance Company of Newark, New Jersey, to underwrite a group accident and sickness insurance plan for ISMS members. Details of this plan are being sent to each physician.

The reference committee reviewed a resolution introduced by the Union County Medical Society relative to professional liability insurance. The resolution as originally presented was reworded and approved as follows: "Whereas, throughout the nation the number of professional liability suits is on the increase and the settlements are for substantial and increasing amounts, which are often in excess of many physicians' insurance coverage, be it therefore resolved that we review the over-all types of medical protective insurance and obtain protective benefits sufficiently great to protect the physician's family and income while alive and his estate after death, and be it further resolved that the Group Insurance Committee of the ISMS be continued, and that it embark upon an investigation of the professional liability insurance question, both as to over-all single person coverage, partnership coverage, group protection plans, and a group plan covering the entire Society."

HOSPITAL-PHYSICIAN RELATIONS

The reference committee on Hospital-Physician Relations considered one supplemental report and one resolution. The supplemental report of the Committee on Medical Practice in Hospitals was reviewed by the reference committee and received its approval as well as approval by the House. The reference committee, in accepting the report of the Committee on Medical Practice in Hospitals, commented that the activities of Dr. Abbott and his Committee deserved commendation by the House of Delegates, for ". . . they have given a tremendous amount of time and effort to the cause of organized medicine."

The reference committee had considered a resolution presented by the Scott County Medical Soci-

ety and recommended its approval by the House of Delegates. The resolution concerned the official status and scope of approved services of the dental oral surgeons. "In 1953, the House of Delegates of the AMA defined and approved a definition. The subsequent action of the Board of Directors of the AMA has apparently nullified the original definition. The Scott County Society requests that the Iowa delegates to the AMA convention endeavor to have the parent body reaffirm its action of 1953 relative to the definition of Dental Oral Surgeons." *Approved.*

A resolution introduced by the Union County Medical Society was referred to the Board of Trustees for consideration. It requested the ISMS to approve an essay contest on subjects teaching youth the advantages of the non-federal medical plan, which is conducted as the AAPS essay contest. The resolution called for three state prizes of $100, $50 and $25 to be awarded for the best Iowa essays. This matter was referred to the Board of Trustees because it involved finances and the Board recommended approval for one year. The House of Delegates concurred.

GENERAL PRACTITIONER AWARD

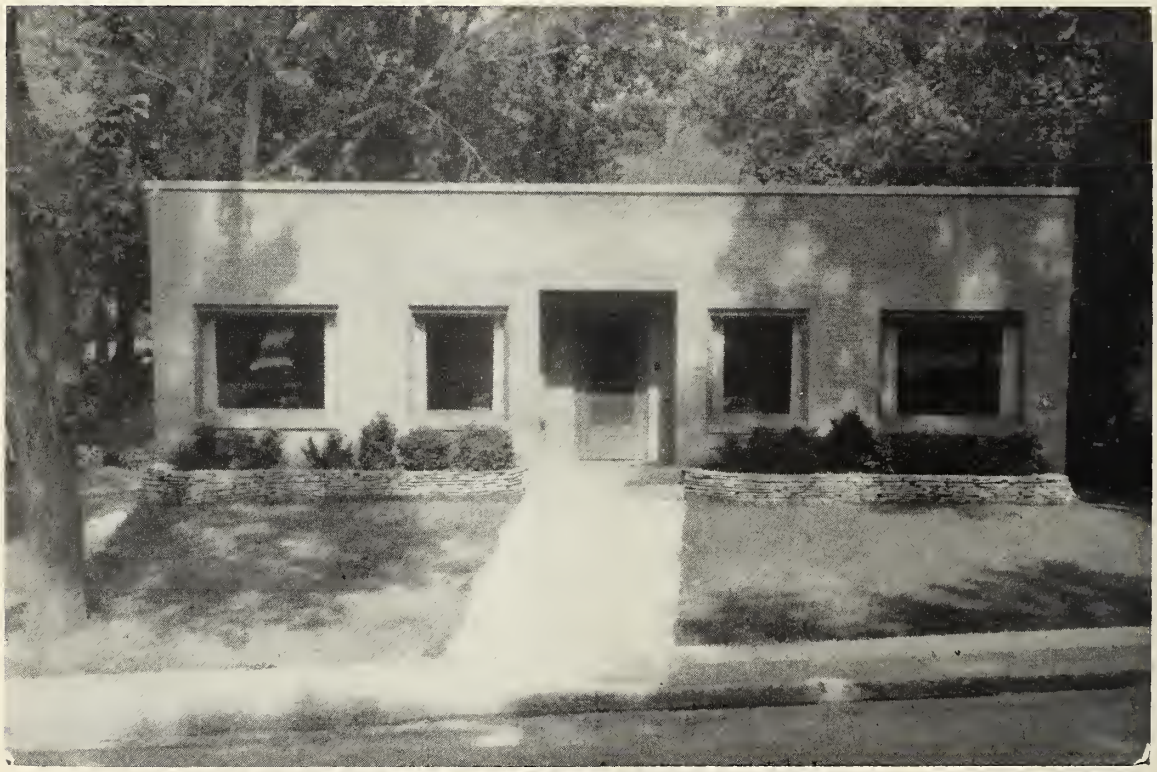
The reference committee recommended that the House of Delegates select Dr. E. J. Watson, 77, of Diagonal, as Iowa's Outstanding General Practitioner for 1955. He had been nominated for this honor by the members of the Ringgold County Medical Society, and the brochure presented with his nomination contained a host of letters from civic and religious leaders recommending him. He is the fifth physician to receive this award from the ISMS.

The House of Delegates approved Des Moines as the site for the 1957 annual meeting of the ISMS.

The House of Delegates complimented Dr. Herman J. Smith for the efficient manner in which he handled the business of the House of Delegates.

The House also gave recognition to the representatives of the Physician Relations Department of Blue Shield for their work as sergeants-at-arms.

The meeting was adjourned by the speaker at 9:40 A.M.



Iowa State Medical Society Headquarters Building

IOWA STATE MEDICAL SOCIETY

Officers and Committees, 1955-1956

President.....Lonnie A. Coffin, Farmington
President Elect.....Wendell L. Downing, LeMars
Vice President.....Walter D. Abbott, Des Moines
Secretary.....Richard F. Birge, Des Moines
Treasurer.....N. Boyd Anderson, Des Moines
Speaker of the House of Delegates,
Herman J. Smith, Des Moines*
Vice Speaker of the House of Delegates,
Thomas F. Thornton, Waterloo*

COUNCILORS

	Term Expires
First District—Arthur F. Fritchen, Decorah	1958*
Second District—Carroll O. Adams, Mason City	1956
Third District—Thomas L. Ward, Arnolds Park	1957
Fourth District—Paul W. Brecher, Storm Lake	1958*
Fifth District—Bruce F. Howar, Webster City	1957
Sixth District—S. Dale Porter, Grinnell	1958
Seventh District—Eugene F. Van Epps, Iowa City	1956
Eighth District—John H. Sunderbruch, Davenport	1957
Ninth District—Elias B. Howell, Ottumwa	1956
Tenth District—Harold J. Peggs, Creston	1957
Eleventh District—Charles H. Flynn, Clarinda	1958

TRUSTEES

Fred Sternagel, West Des Moines, Chairman	1956
George H. Scanlon, Iowa City	1957
Ernest M. Kersten, Fort Dodge	1958

DELEGATES TO AMA

	Term Expires
Donovan F. Ward, Dubuque	January 1, 1958*
Robert N. Larimer, Sioux City	January 1, 1957
Francis C. Coleman, Des Moines	January 1, 1957

ALTERNATE DELEGATES TO AMA

	Term Expires
Frank G. Ober, Burlington	January 1, 1958*
William M. Sproul, Des Moines	January 1, 1957
Callistus H. Stark, Cedar Rapids	January 1, 1957

EXECUTIVE COUNCIL

Lonnie A. Coffin, Chairman ..... Farmington
Wendell L. Downing ..... LeMars
Walter D. Abbott ..... Des Moines
Richard F. Birge ..... Des Moines
N. Boyd Anderson ..... Des Moines
Fred Sternagel ..... West Des Moines
George H. Scanlon ..... Iowa City
Ernest M. Kersten ..... Fort Dodge
Arthur F. Fritchen ..... Decorah
Carroll O. Adams ..... Mason City
Thomas L. Ward ..... Arnolds Park
Paul W. Brecher ..... Storm Lake
Bruce F. Howar ..... Webster City
S. Dale Porter ..... Grinnell
Eugene F. Van Epps ..... Iowa City
John H. Sunderbruch ..... Davenport
Elias B. Howell ..... Ottumwa
Harold J. Peggs ..... Creston
Charles H. Flynn ..... Clarinda
Donovan F. Ward ..... Dubuque
Robert N. Larimer ..... Sioux City
Francis C. Coleman ..... Des Moines

* Re-elected at 1955 Annual Meeting.

THE JOURNAL

Everett M. George ..... Des Moines

Standing Committees of the House of Delegates

Committee on Scientific Work

L. A. Coffin, Chairman ..... Farmington
W. L. Downing ..... LeMars
R. F. Birge ..... Des Moines
N. B. Anderson ..... Des Moines

Committee on Legislation

F. C. Coleman, Chairman ..... Des Moines
B. T. Whitaker ..... Boone
J. D. Conner ..... Nevada
H. H. Kersten ..... Fort Dodge
L. A. Coffin ..... Farmington
W. L. Downing ..... LeMars
R. F. Birge ..... Des Moines

Committee on Necrology

This committee consists of the Councilors

Medico-Legal Committee

L. K. Meredith, Chairman ..... Des Moines (1958)
J. C. Nolan ..... Corning (1957)
V. C. Robinson ..... Des Moines (1956)

Committee on Articles of Incorporation and Bylaws

A. B. Phillips, Chairman ..... Des Moines
C. J. Baker ..... Fort Dodge
P. F. Chesnut ..... Winterset

Committee on Medical Service

C. V. Edwards, Chairman ..... Council Bluffs
M. I. Olsen ..... Des Moines
R. C. Gutch ..... Chariton
W. D. Abbott ..... Des Moines
Isaac Sternhill ..... Council Bluffs

Subcommittee on Prepayment Medical Care

M. I. Olsen, Chairman ..... Des Moines
R. E. Smiley ..... Mason City
W. C. Eller ..... Waterloo
T. W. McMeans ..... Davenport
E. B. Hoeven ..... Ottumwa
C. A. Nicoll ..... Panora
G. G. Young ..... Des Moines

Subcommittee on Veterans Affairs

R. C. Gutch, Chairman ..... Chariton
E. M. Honke ..... Sioux City
R. A. Dorner ..... Des Moines
J. W. Castell ..... Fairfield
John Parke ..... Cedar Rapids
D. W. Dohnalek ..... Waukon

Subcommittee on Hospital and Professional Relations

W. D. Abbott, Chairman ..... Des Moines
C. H. Stark ..... Cedar Rapids
A. L. Nelson ..... Des Moines
J. E. Tyrrell ..... Manchester
D. C. Koser ..... Cherokee
H. K. Shiffler ..... Des Moines

Subcommittee on Medical Services to the Indigent

Isaac Sternhill, Chairman ..... Council Bluffs
A. J. Havlik ..... Tama
E. B. Grossmann ..... Orange City
P. T. Meyers ..... Bloomfield

Committee on Medical Education and Hospitals

L. F. Hill, Chairman ..... Des Moines
J. H. Randall ..... Iowa City
R. L. Wicks ..... Boone
G. H. Scanlon ..... Iowa City
D. C. Conzett ..... Dubuque

Grievance Committee

R. M. Dahlquist, Secretary ..... Decorah
M. G. Bourne ..... Algona
J. L. Powers ..... Estherville
W. M. Krigsten ..... Sioux City
G. E. McFarland, Jr. ..... Ames
F. N. Cole, Chairman ..... Iowa Falls
W. C. Keettel ..... Iowa City
G. H. Ashline ..... Keokuk
A. L. Yocom ..... Chariton
H. G. Beatty ..... Creston
P. L. Spencer ..... Essex

Committee on Public Health

E. A. Larsen, Chairman ..... Centerville
E. G. Zimmerer ..... Des Moines
W. D. Paul ..... Iowa City
C. B. Larson ..... Iowa City
O. A. Stauch ..... Sioux City

J. I. Marker ..... Davenport
C. J. Lohmann ..... Burlington
E. B. Floersch ..... Council Bluffs
R. H. McBride ..... Sioux City
S. P. Leinbach ..... Belmond

Subcommittee on Cancer

E. G. Zimmerer, Chairman ..... Des Moines
A. L. Jenks, Jr. ..... Des Moines
H. W. Morgan ..... Mason City
R. W. McConnell ..... Davenport
W. J. Balzer ..... Davenport
S. F. Singer ..... Ottumwa
K. R. Cross ..... Iowa City
J. D. Hennessy ..... Council Bluffs
J. J. Redmond ..... Cedar Rapids

Subcommittee on Chronic Illness

W. D. Paul, Chairman ..... Iowa City
J. F. Kanealy ..... Cedar Rapids
D. A. Glomset ..... Des Moines
C. J. McGarvey ..... Des Moines
Abraham Gelperin ..... Des Moines
D. D. Harris ..... Marshalltown
M. G. Bourne ..... Algona

Subcommittee on Rehabilitation

C. B. Larson, Chairman ..... Iowa City
H. E. Wichern ..... Des Moines
D. C. Wirtz ..... Des Moines
W. M. Krigsten ..... Sioux City
H. H. Samberg ..... Des Moines

Subcommittee on Maternal and Child Health

O. A. Stauch, Chairman ..... Sioux City
C. P. Phillips ..... Muscatine
R. M. Collins ..... Council Bluffs
H. A. Weis ..... Davenport
H. E. Farnsworth ..... Storm Lake
C. A. Hanson ..... Waterloo
Madelene Donnelly ..... Des Moines
J. R. Rankin ..... Keokuk

Subcommittee on Mental Health

J. I. Marker, Chairman ..... Davenport
H. C. Merillat ..... Des Moines
L. B. Sedlacek ..... Cedar Rapids
M. B. Emmons ..... Clinton
Paul Ferguson ..... Lake City
A. C. Pfohl ..... Dubuque
P. G. Couchman ..... Mount Pleasant
J. D. Mahoney ..... Council Bluffs
G. R. Rausch ..... Sioux City

Subcommittee on Industrial Health

C. J. Lohmann, Chairman ..... Burlington
D. W. Coughlan ..... Des Moines
K. E. Lister ..... Ottumwa
H. A. Amesbury ..... Clinton
M. G. Sanders ..... Fort Dodge
H. R. Henstorf ..... Shenandoah
S. D. Porter ..... Grinnell
R. D. Heilman ..... Sioux City

Subcommittee on National Health Associations

E. B. Floersch, Chairman ..... Council Bluffs
R. H. Heeren ..... Des Moines
F. H. Top ..... Iowa City
L. E. January ..... Iowa City
L. J. Galinsky ..... Des Moines
William Spear ..... Oakdale

Subcommittee on Polio

R. H. McBride, Chairman ..... Sioux City
A. F. Harrington ..... Cedar Rapids
I. J. Hanssmann ..... Council Bluffs
Margaret J. Loseke ..... Des Moines
Charlotte Fisk ..... Des Moines

Subcommittee on Rural Health

S. P. Leinbach, Chairman ..... Belmond
R. S. Jaggard ..... Oelwein
R. E. Griffin ..... Sheldon
J. W. Gauger ..... Early
J. E. Blumgren ..... Vinton
H. E. O'Neal ..... Tipton
D. G. Sattler ..... Kalona
H. J. Richter ..... Albia
R. W. Boulden ..... Lenox
R. M. Needles ..... Atlantic
A. G. Felter ..... Van Meter

COMMITTEE ON PUBLIC RELATIONS

O. N. Glesne, Chairman ..... Fort Dodge
L. E. Frink ..... Reinbeck
C. W. Seibert ..... Waterloo
D. H. King ..... Spencer
T. W. McMeans ..... Davenport
W. M. Sproul ..... Des Moines
C. N. Hyatt ..... Corydon
E. H. Files ..... Cedar Rapids

Subcommittee on Interprofessional Activities

F. M. Burgeson, Chairman ..... Des Moines
R. H. Moe ..... Griswold
L. C. Nelson ..... Jefferson

Subcommittee on Medical Radio and Press Relations

R. B. Stickler, Chairman ..... Des Moines
H. J. Smith ..... Des Moines
Oscar Alden ..... Red Oak

COMMITTEE ON HEALTH EDUCATION

R. B. Stickler, Chairman ..... Des Moines
C. D. Ellyson ..... Waterloo
D. E. Mitchell ..... Mount Ayr
H. C. Merillat ..... Des Moines
F. N. Johnson ..... Des Moines
J. G. Fellows ..... Ames
H. J. Smith ..... Des Moines
R. G. Gillett ..... Sigourney

Special Committees of the House of Delegates

OSTEOPATHIC COMMITTEE

J. D. Conner, Chairman ..... Nevada
J. J. Shurts ..... Eldora
J. M. Rhodes ..... Pocahontas
T. E. Shea ..... Storm Lake
C. A. Boice ..... Washington

NATIONAL EMERGENCY MEDICAL SERVICE

R. C. Hardin, Chairman ..... Iowa City
J. M. Tierney ..... Carroll
E. J. Vosika ..... Shelby
V. L. Schlaser ..... Des Moines
E. O. Gilfillan ..... Bloomfield

WOMAN'S AUXILIARY ADVISORY COMMITTEE

W. L. Downing, Chairman ..... LeMars
Fred Sternagel ..... West Des Moines
P. W. Brecher ..... Storm Lake

COMMITTEE ON CORONER'S LAW

W. D. Anderson, Chairman ..... Des Moines
S. A. Cohen ..... Council Bluffs
E. E. Gamet ..... Lamoni

NURSING EDUCATION AND SERVICE

E. P. Lovejoy, Chairman ..... Des Moines
H. W. Mathiasen ..... Council Bluffs
E. J. Boyd ..... Iowa City
R. M. Collison ..... Oskaloosa
L. O. Goodman ..... Marshalltown

HISTORICAL COMMITTEE

Jeannette Dean-Throckmorton, Chairman ..... Des Moines
C. A. Henry ..... Farson
C. A. Boice ..... Washington
C. L. Jones ..... Gilmore City
J. H. Chittum ..... Wapello

COMMITTEE ON GROUP INSURANCE

G. G. Young, Chairman ..... Des Moines
J. W. Ferguson ..... Newton
G. E. Mountain ..... Des Moines

COMMITTEE ON BLOOD BANKING

R. C. Hardin, Chairman ..... Iowa City
E. L. DeGowin ..... Iowa City
W. C. Thatcher ..... Fort Dodge
Arne Knutsen ..... Sioux City
W. S. Pheteplace ..... Davenport

MEDICAL SOCIETY-BLUE SHIELD STUDY

H. H. Kersten, Chairman ..... Fort Dodge
R. N. Larimer ..... Sioux City
S. P. Leinbach ..... Belmond
J. H. Sunderbruch ..... Davenport

COMMITTEE ON SCIENTIFIC EXHIBITS

J. T. McMillan, Chairman ..... Des Moines
J. W. Green, Jr. ..... Des Moines
R. G. Carney ..... Iowa City

MEMBERSHIP ROSTER

of the

IOWA STATE MEDICAL SOCIETY

1955

Members in Good Standing

as of

June 15, 1955

Aagesen, Carl A., Dows
Abbott, Walter D., Des Moines
Acher, Albert E., Fort Dodge
Acker, Richard D., Waterloo
Acker, Wesley H., Waterloo
Ackerman, Emma M., Sioux City
★Ackerman, John H., Jacksonville, Fla.
Adams, Carroll O., Mason City
Adams, Ernest M., Central City (L.M.)
Adams, Leon P., Newton
Adams, Lyle E., Iowa City
Addison, Cornelius P., Waterloo
Ady, Albert E., West Liberty
Aeilts, Eerko S., Sibley (L.M.)
Agnew, Fred F., Independence (L.M.)
Agnew, James W., Davenport
Ahmann, Edward J., Walcott
Ahrens, John H., Waverly
Aid, Francis H., Burlington
Alberti, Robert L., Oskaloosa
Alberts, Marion E., Des Moines
Albright, George C., Iowa City
Alcorn, Harry W., Mason City
Alden, Oscar, Red Oak
Alftine, David C., Muscatine
Allen, Herbert B., Newton
Allen, Hoyt H., Fort Dodge
Allen, Marion B., Fort Dodge
Allender, Robert B., Iowa City
Allison, Monroe P., Northwood
Alt, Louis P., Dubuque
Ambery, Sebastian, Keokuk
Amesbury, Harry A., Clinton
Amick, Louis B., Sac City
Amick, Perry P., Des Moines
Amlie, Paul J., Waverly
Andersen, Bruce V., Greene
Andersen, Holger M., Strawberry Point
Andersen, Kenneth N., Center Point
Anderson, DeWayne C., Stanhope
Anderson, Edward E., Davenport
Anderson, George S., Iowa City
Anderson, Glenn J., Winterset
Anderson, Harold N., Des Moines
Anderson, J. Donald, Des Moines
Anderson, N. Boyd, Des Moines
Anderson, Robert E., Chariton
Anderson, Stanley N., Onawa
Anderson, Walter D., Des Moines
Andre, Gaylord R., Lisbon
Andrew, Earl V., Maquoketa
Anneberg, A. Reas, Carroll
Anneberg, Paul D., Carroll
Anneberg, Walter A., Carroll
Anrode, Ralph A., Davenport
Anspach, Ellen E. Ferengul, Mitchellville
Anspach, Royal G., Colfax
Anspach, Royal S., Mitchellville
Anthony, Walter E., Ottumwa
Arent, Asa S., Humboldt
Arkin, Archie A., Des Moines
Armitage, George I., Osceola
Armstrong, Frederick C., Cascade
Armstrong, Max A., Newell
*Armstrong, William B., Ames
Arnold, Dorothy J., Iowa City
Arp, Louis C., Iowa City
Aschoff, Carl R., Cedar Rapids
Ash, Wallace H., DeWitt
Ash, William E., Council Bluffs
Ashline, George H., Keokuk
Asthalter, Robert W., Muscatine
Atkinson, George S., Oskaloosa
Augspurger, Byron B., Des Moines
Ayers, Emmet V., Charles City
Ayers, LeRoy J., Sioux City

Babcock, Oliver L., Albert City
Bacon, John F., Ames
Bailey, Jesse L., Des Moines
Bailey, Robert O., Waterloo
Bain, C. Lorimer, Corning
Baird, William A., Ames
Bairnson, George A., Cedar Falls
Baker, Charles J., Fort Dodge
Baker, John N., Cedar Falls
Bakody, John T., Des Moines
Baldwin, Leon A., Riverton (L.M.)
Balkema, Walter S., Sheldon
Baltzell, Winston C., Charles City
Balzer, Walter J., Davenport
Banks, Keith D., Knoxville
Banton, Oscar H., Charles City
Barbieri, Angelo B., Garwin
Barbour, Howard W., Mason City (L.M.)
Barbour, William Jay, Shell Rock
Barg, Egmont H., Mason City
Barnes, Bernard C., Des Moines
Barnes, Milford E., Iowa City (L.M.)
Barnett, Sylvester W., Cedar Falls
Barr, Guy E., Sioux City
Barrent, Milton E., Clinton
Barrett, James W., Jr., Independence
Barrett, Sterling A., Waterloo
Bartels, Edward R., Dubuque
Barthel, John P., Cedar Rapids
Bartlett, George E., New Sharon
Bartley, Richard L., Audubon
Barton, Edwin G., Ottumwa (L.M.)
Barton, Robert L., Dubuque
Bartruff, Charles H., Reinbeck
Bascom, Lewis A., Nora Springs
Basinger, Byron L., Goldfield
Bastron, Harold C., Red Oak
Bateman, Rolland D., Jr., Iowa City
Bates, Ernest G., Aurelia
Bates, Maurice T., Des Moines
Baumann, James G., Charles City
Bausch, Richard G., Cedar Rapids
Bay, Frank N., Albia
Beal, Arline M., Davenport
Bean, Elmer O., Council Bluffs
Bean, William B., Iowa City
Beardsley, David E., Cedar Rapids (L.M.)
Beardsley, Ralph W., Livermore
Beatty, Alexander S., Creston (L.M.)
Beatty, Edward D., Mallard (L.M.)
Beatty, Howard G., Creston
Beaumont, Fred H., Council Bluffs
Becker, Eugene B., New Hampton
Beckman, Charles W., Kalona
Beckman, Peter W., Perry (L.M.)
Beddoes, Morris G., Waterloo
Bedell, George N., Iowa City
Beebe, John R., Mt. Pleasant
Beebe, Kenneth P., Mt. Pleasant
Beeh, Edward F., Fort Dodge
Bees, Louis E., Bennett
Begley, Bernard J., Iowa City
Behrens, George W., Davenport
Bell, Edward P., Pleasantville (L.M.)
Bell, Robert S., Burlington
Bender, Henry A., Waterloo
Bender, Martin J., Iowa City
Bendixen, Frederick C., LeMars
Benfer, Merrill M., Davenport
Benge, Donald K., Hampton
Bennett, Geoffrey, W., Oskaloosa
Benton, Jay S., Williamsburg
Beran, Joseph J., Waterloo
★Berard, William P., San Francisco, Calif.
★Berg, John W., Ames
Bergen, Charles T., Northwood
Berger, Raymond A., Davenport
★Berggreen, Raymond G., Mason City
Bergstrom, Albin C., Missouri Valley
Berkstresser, Charles F., Sioux City
Bernard, Ransom D., Ames
★Berndt, Allen E., Montgomery, Ala.
Berney, Paul W., Cedar Rapids
Bessmer, William G., Davenport
Best, Gorden N., Council Bluffs
Bettler, Philip L., Sioux City
Beye, Cyrus L., Sioux City
Bezman, Harry S., Traer
Bickley, Donald W., Waterloo
Bickley, John W., Waterloo
Bierman, Martyn H., Jr., Council Bluffs
Bierring, Walter L., Des Moines (L.M.)
Biersborn, Byron M., State Center
Bigelow, Charles T., La Grange, Ill. (L.M.)
Billingsley, John W., Newton
Binford, William S., Davenport (L.M.)
Bird, Raymond G., Clarion
Birge, Richard F., Des Moines
Birney, Cleanthus E., Estherville (L.M.)
Bisgard, Carl V., Harlan
Bishop, James F., Davenport
Black, Harold C., Des Moines
Blackstone, Martin A., Sioux City
Blaha, George A., Whitten
Blaha, Vernon B., Marshalltown
Blair, Donald W., Des Moines
Blair, James B., Cherokee
Blanchard, Russell W., Council Bluffs
Blenderman, Albert D., Jr., Paullina
Bliss, William R., Ames
Block, Charles E., Davenport
Block, Lawrence A., Davenport
Block, Walter M., Cedar Rapids
Blodi, Frederick C., Iowa City
Blome, Arthur L., Ottumwa
Blome, Glenn C., Ottumwa
Blong, Theodore E., Stacyville
Bluhm, Samuel, Muscatine
Blum, Aloysius A., Wall Lake
Blume, Donald B., Sioux City
Blumgren, John E., Vinton
Bock, Don G., Fort Dodge
Bock, Lewis L., Des Moines
Bockoven, William A., Garner
Boden, Worthey C., Sioux City
Boe, Henry, Sioux City
Boice, Clyde A., Washington (L.M.)
Boiler, William F., Iowa City
Boller, Galen C., Waterloo
Bond, Thomas A., Des Moines
Bone, Harold C., Des Moines
Bonfiglio, Michael, Iowa City
Borgen, Donald L., Gowrie
Borre, Helge, Hubbard
Borts, Irving H., Iowa City
Bos, Howard C., Oskaloosa
Bossingham, Earl N., Clarinda
Boston, Burr C., Waterloo
Boulden, Roger W., Lenox
Boulware, Lois, Iowa City
Bourne, Melvin G., Algona
Bovenmyer, DeVoe O., Ottumwa
Bowers, Arthur S., Orient (L.M.)
Bowers, Clifford V., Sioux City
Bowers, Henry W., Nevada
Bowie, Louis L., Marshalltown
Boyd, Eugene J., Iowa City
Boyer, Howard C., Council Bluffs (L.M.)
Boyer, Ulysses S., Davenport
Boysen, James F., Sioux City
Bozek, Thaddeus T., Iowa City
Bradford, Clyde R., Des Moines
Bradford, George T., Dubuque
Bradley, Carl L., Newhall
Bradshaw, Douglas E., Fort Dodge
Braley, Alson E., Iowa City
Braunlich, George, Davenport
Bray, Daniel L., Algona
Brecher, Paul W., Storm Lake
Brendel, Alfred, Central City
★Brennan, James E., Long Beach, Calif.
Brereton, Harold L., Emmetsburg
Bridge, Barton C., Jefferson
Bridgeman, Harry L., Knoxville (L.M.)
Bries, Frank J., North Buena Vista
Brindley, Robert W., Des Moines
Brinegar, Willard C., Cherokee
Brink, Raymond J., Ayrshire
Brinkman, William F., Pocahontas
Brintnall, Edgar S., Iowa City
Broderick, Clarence E., Cherokee
Brody, Sidney, Ottumwa
Broers, Merlin U., Schleswig
★Broman, John A., Fort Sill, Okla.
Brown, Addison W., Des Moines
Brown, Arthur C., Council Bluffs
Brown, Carroll A., Sioux City
Brown, Douglas H., Forest City
Brown, Gerald F., Anamosa
Brown, Ivan E., Hartley
Brown, Kenneth R., Leon
Brown, Merle J. Davenport
Brown, Robert C., Mason City
Brown, Wayne B., Mt. Pleasant
Brownstone, Manuel, Clear Lake
Brownstone, Sidney, Clear Lake
Brubaker, Carl F., Corydon
Bruce, James H., Fort Dodge
Brumer, Herbert B., St. Petersburg, Fla. (L.M.)
Brummitt, Charles F., Centerville
Brundige, Ralph E., Akron
Bruner, Julian M., Des Moines
Brunk, Amos W., Prescott
Brush, C. Herbert, Shenandoah
Brush, Frederick C., Mason City
Buchanan, John J., Milford
Buckles, Robert D., Waterloo
Buckwalter, Joseph A., Iowa City
Bullock, Alfred L., Cushing
Bullock, Grant D., Inwood
Bullock, Wm. Elmer, Lake Park (L.M.)
Bunge, Raymond G., Iowa City
Bunting, Richard A., Shenadoah
Burbank, Dean S., Pleasantville
Burch, Earl S., Dayton
Burcham, Thomas A., Des Moines
Burcham, Thomas A., Jr., Des Moines
Buresh, Abner, Lime Springs
Burgeson, Floyd M., Des Moines
Burgess, Arthur W., Iowa Falls
Burke, Edmund T., Des Moines
Burke, Thomas A., Mason City
Burleson, Marvin W., Fort Dodge
Burns, Harry, Des Moines
Burns, Robert I., Des Moines
Burnside, Raymond A., Des Moines
Burr, Charles L., Des Moines
Burroughs, Charles R., Knoxville
Burroughs, Hubert H., Sioux City
Bushmer, Alexander, Orange City
Bushnell, John W., Sioux City

Butler, Margaret K., Fort Dodge
Buxton, Otho C., Jr., Webster City
Buzan, Edwin F., Des Moines
Byram, Burns M., Marengo
Byrnes, Clemmet W., Dunlap
Byrum, Robert J., Davenport

Caauve, Lloyd E., Tulsa, Okla.
Cahn, Phillip, Oakdale
Calbreath, Lloyd B., Humeston
Callaghan, Ambrose J., Jr., Sioux City
Callahan, George D., Iowa City
Camel, Louise M., Council Bluffs
Camp, John R., Britt
Campbell, Nathan, Yarmouth
Campbell, Thomas R., Sioux Rapids
Campbell, Walter V., Oskaloosa
Canady, George F., Jefferson
Cantwell, John D., Davenport (L.M.)
Carey, Edward T., Jr., Clinton
Carey, Michael J., Council Bluffs
Carlile, Amos W., Manning (L.M.)
Carlson, Elmer H., Muscatine
Carlson, Frank G., Mason City (L.M.)
Carney, Robert G., Iowa City
Carney, Roscoe P., Jr., Davenport
Carpenter, Fred E., Newton
Carpenter, Ralph C., Marshalltown
Carr, Leslie L., West Union
Carrigg, Lawrence G., Cedar Rapids
Carroll, Thomas J., Sibley
Carryer, Carl H., Des Moines (L.M.)
Carson, Andros, Des Moines (L.M.)
Carson, Raymond W., Winterset
Carstensen, Albert B., Linn Grove
Carstensen, Vincent H., Waverly
Carter, James G., Iowa City
Carter, John R., Iowa City
Carver, David C., Rockwell City
Cary, Walter, Dubuque
Cash, Paul T., Des Moines
Cashman, Chester F., Hartley
Castell, John W., Fairfield
Castles, William A., Dallas Center
Catalona, William E., Muscatine
Catlin, Karl A., Clarinda
Catterson, Leroy F., Oskaloosa
Caudill, George G., Des Moines
Caughlan, Gerald V., Council Bluffs
Cauley, Francis P., Anthon
Caulfield, John D., New Hampton
Chain, Leo W., Dedham
Chambers, Charles L., Des Moines (L.M.)
Chambers, James W., Des Moines
Chapin, Josephine M., Iowa City
Chapler, Keith M., Dexter
Chapman, Robert M., Cedar Rapids
Chase, Sumner B., Fort Dodge
Chase, Walter E., Rippey
Chase, William B., Des Moines (L.M.)
Chase, William B., Jr., Des Moines
Chesnut, Paul F., Winterset
Chester, Walter S., Albia
Childs, Hal A., Creston (L.M.)
Chittum, John H., Wapello (L.M.)
Christensen, Eunice M., Spencer
Christensen, Everett D., Spencer
Christensen, Floyd D., Remsen
Christensen, John R., Eagle Grove
Christiansen, Charles C., Grand Mound
Christiansen, James, Sioux City
Christiansen, John E., Durant
Christopherson, Joseph E., Mason City
Clappison, Gordon B., Iowa City
Clapsaddle, Dean W., Clear Lake
Clapsaddle, John G., Burt
Clark, Clayton W., Nashua
Clark, George H., Oskaloosa
Clark, James P., Estherville
Clark, Orson W., Ogden
Clark, Richardson E., Manchester
Clark, Thomas D., Knoxville
Clary, William H., Prescott (L.M.)
Clasen, Henry W., Cedar Falls (L.M.)
Clemens, Albert L., Des Moines
Clifton, James A., Watertown, Mass.
Closson, Charles L., Walker
Cmeyla, Patrick M., Sioux City
Cobb, Elliott A., Cedar Rapids
Coburn, Frank E., Iowa City
Cochran, J. Lawrence, Carroll
Cochrane, Allen M., Perry
Coddington, James H., Humboldt
Cody, William E., Sioux City
Coffin, Lonnie A., Farmington
Coffin, Velma E., Iowa City
Coffman, Eugene W., Dubuque
Cogley, John P., Council Bluffs
Cohen, Sidney A., Council Bluffs
Colbert, Lawrence D., Royal
Cole, Elmer J., Woodbine (L.M.)
Cole, Fern N., Iowa Falls
Cole, Harold P., Thurman
Cole, Julia, Ames
Cole, Richard D., Iowa City
Coleman, Francis C., Des Moines
Collignon, Urban J., Council Bluffs
Collins, Alice J., Des Moines
Collins, Robert M., Council Bluffs
Collison, Robert M., Oskaloosa
Comly, Hunter H., Iowa City
Conkling, Russell W., Newton
Conley, Rollin M., Perry
★Conoan, Eduardo A., San Diego, Calif.
Conlon, James B., Council Bluffs
Conmey, Roy M., Sergeant Bluffs
Connell, John, Des Moines
Connelly, Edgar J., Dubuque
Conner, John D., Nevada
Conner, Ray B., Fort Dodge
Conzett, Donald C., Dubuque
Cook, Kenneth G., Fairfield
Cook, R. Stanford, Iowa City
Cook, Stuart H., Rock Rapids
Cooper, Clark N., Waterloo
Cooper, Dean C., Fort Dodge
Cooper, Gladys A., Red Oak
Cooper, Jay C., Villisca, (L.M.)
Cooper, Raymond E., Keokuk
Cooper, Wayne K., Cedar Rapids
Coppoc, Loran E., Ottumwa
Corbin, Sylvannus W., Corydon
Corcoran, Thomas E., Des Moines
Cords, Charles H., Rudd
Coriden, Thomas L., Sioux City
Corn, Henry H., Des Moines
Cornish, James A., Storm Lake
Corton, Richard V. M., Waterloo
Couchman, Mary P., Mt. Pleasant
Couchman, Phillip C., Mt. Pleasant
Coughlan, Charles H., Fort Dodge
Coughlan, Daniel W., Des Moines
Coulson, Forest H., Burlington
Cox, Russell L., Estherville
Crabb, Dayrle, N. Denison
Crain, Lewis F., Deep River (L.M.)
Crain, Mattie M., Deep River (L.M.)
Crandall, Jack S., Marshalltown
Crawford, Robert R., Burlington
Crawford, W., McCulloch, Burlington
Cressler, Frank E., Churdan
Cretzmeyer, Charles H., Algona (L.M.)
Cretzmeyer, Francis X., Emmetsburg
Crew, Arthur E., Marion (L.M.)
Crew, Philip I., Cedar Rapids
Croker, Mary Ann, Manchester
Cross, Donald L., Boone
Cross, Kenneth R., Iowa City
Crossley, J. Wesley, Mason City
Crow, George B., Burlington
Crowley, Daniel F., Des Moines (L.M.)
Crowley, Daniel F., Jr., Des Moines
Crowley, Paul J., Davenport
Croxdale, Edward L., Villisca
Crumpton, Robert C., Webster City
Culbertson, James W., Iowa City
Culbertson, Robert A., Des Moines
Cullen, Stuart C., Iowa City
Culp, David A., Iowa City
Cunnick, Paul C., Davenport
Cunningham, Glenn D., Davenport
Cunningham, Melvin B., Norwalk
Curtis, Dean, Chariton
Cusick, George W., Davenport

Dahl, Harry W., Des Moines
Dahlbo, John W., Sutherland
Dahlquist, Ralph M., Decorah
Dalager, Robert D., Ottumwa
Dalbey, Glenn M., Traer
Danielson, May, Clinton
Danley, Royal C., Hamburg
Darrow, Clarence A., Dubuque
Daut, Richard V., Davenport
Daut, Walter W., Muscatine
Davey, William P., Sioux City
★Davidson, Maurice C., El Paso, Tex.
Davidson, Thorald E., Mason City
Davis, Arthur E., Seymour
Dawson, Emerson B., Fort Dodge
Dawson, Leon E., Des Moines
Day, Philip M., Oskaloosa
★Day, Richard T., Hampton
Deakins, Martin L., Vinton
Dean, Abbott M., Council Bluffs
Dean, Frank W., Council Bluffs (L.M.)
Dean, Ray H., Washington (L.M.)
Dean, William F., Osceola (L.M.)
Deaton, Helen J., Iowa City
Decker, Charles E., Davenport
Decker, Henry G., Des Moines
Decker, Jay C., Sioux City (L.M.)
DeGowin, Elmer L., Iowa City
deGraffenried, Thomas P., Des Moines
Demaree, Chester, Lacona (L.M.)
De Meulenaere, John C., Grinnell
Dempewolf, Robert D., Bellevue
Dennert, Walter G., Des Moines
Dennison John C., Bellevue (L.M.)
Deranleau, Robert F., Perry
DeShaw, Earl H., Monticello
Des Marias, Varina, Grundy Center
Devine, Arthur W., Iowa City
★Devine, James S., San Diego, Calif.
Dewees, Frank L., Keokuk
Dewey, Jay R., Schaller
DeYarman, Kyle T., Morning Sun
De Young, Ward A., Glenwood
Diamond, Bernard V., Waterloo
Dick, Fred, Jr., Cedar Falls
Dickens, James H., Des Moines
Diddy, Keith W., Perry
Dierker, Bernard J., Fort Madison
Dierker, LeRoy J., Fort Madison
Dimsdale, Lewis J., Sioux City
Dingman, Marshall E., Urbana
Ditto, Boyd L., Burlington
Ditto, Winston B., Burlington
Doane, Grace O., Des Moines
Dodge, Lynn Q., Ames
Doering, Valentine T., Fort Madison
Dohnalek, Donald W., Waukon
Dolan, Henry F., Anamosa
Dolan, Thomas R., Anamosa
Dolmage, George F., Buffalo Center
Donahoe, Joseph F., Fort Dodge
Donahue, James C., Centerville
Donlin, Robert E., Harlan
Donnelly, Madelene M., Des Moines
Donohue, Edmund S., Sioux City
Doolittle, Russell C., Waynesville, N. C. (L.M.)
Doran, John R., Ames
Dorner, Ralph A., Des Moines
Dorsey, Thomas J., Fort Dodge
Dorsey, Thomas J., Jr., Fort Dodge
Doss, W. Gordon, Cresco
Doss, William N., Leon
Down, Howard I., Sioux City
Downing, Arthur H., Des Moines
Downing, James A., Des Moines
Downing, John S., Cedar Rapids
Downing, Leroy M., Cedar Rapids (L.M.)
Downing, Wendel L., Le Mars
Downs, Vernon S., Ottumwa
Doyle, Joseph L., Sigourney
Dressler, John B., Ida Grove
Drew, Edward J., Des Moines
Drier, William C., Waterloo
Driver, Richard W., Waterloo
Drown, Roger E., Fort Dodge
Dubansky, Marvin H., Des Moines
Duddles, Ralph T., Scranton
Duewall, Rudolph H., West Des Moines
Dulin, Evelyn H., Iowa City
Dulin, John W., Iowa City
Dulin, Tarana J. G., Iowa City (L.M.)
Duling, Raymond J., Sioux City
Dulmes, Abraham H., Klemme
Dunham, Henry H., Waterloo
Dunlevy, James H., Fairfield
Dunn, Dale E., Estherville
Dunn, Francis C., Cedar Rapids
Dunn, James, Davenport (L.M.)
Dunn, Robert C., Des Moines
Dunner, Ada, Des Moines
Dusdieker, Stanley W., Des Moines
Dushkin, Milton A., Chicago, Ill.
Dutton, Dean A., Van Horne
Dvorak, Joseph E., Sioux City
Dwyer, Bernard B., Clinton
Dwyer, Robert E., Clinton
Dyson, James E., Des Moines
Dyson, Ralph E., Des Moines

Eastburn, Harvey B., Burlington
Eastwood, Douglas W., Iowa City
Eaton, Robert C., Clarion
Ebinger, Edward W., Ottumwa
Echternacht, Arthur P., Fort Dodge
Eckart, Emile P., Fort Dodge
★Eckberg, Richard A., Laredo, Texas
Eckhardt, Richard D., Iowa City
Eckstein, John W., Iowa City
Edelman, David L., Des Moines
Edington, Frank D., Spencer
Edvenson, Gaylord M., Iowa Falls
Edwards, Charles C., Rochester, Minn.
Edwards, Charles V., Council Bluffs
Edwards, Ralph R., Centerville
Egan, Thomas J., Bancroft
Egbert, Daniel S., Fort Dodge
Egermayer, George W., Elliott (L.M.)
Eggleston, Alfred A., Burlington
Egloff, William C., Mason City
★Ehmke, Bruce C., Ft. Sam Houston, Tex.

Ehrenhaft, Johann L., Iowa City
Eicher, Charles R., Iowa City
Eiel, John O., Osage
Eiel, Merrill O., Osage
Eikleberry, Lois S., West Branch
Eisenach, John R., Shenandoah
Elkins, Higdon, B., Iowa City
Eller, Lancelot W., Kanawha
Eller, William C., Waterloo
Elliott, Olin A., Des Moines
Ellis, Howard G., Des Moines
Ellis, Philip P., Iowa City
Ellison, George M., Clinton
Ellsworth, H. Charles, Cherokee
Ellyson, Charles W., Waterloo (L.M.)
Ellyson, Craig D., Waterloo
Ely, Lawrence O., Des Moines
Emanuel, Dennis G., Ottumwa
Emerson, Edward L., Muscatine
Emmons, Marcus B., Clinton
Emmons, Margaret S., Clinton
Emmons, Richard O., Clinton
Eneboe, Edward M., Hawarden
Engelmann, Andrew T., Sioux City
Enggas, John T., Britt
Englund, Philip M., Fort Dodge
Enna, Melchior D., Dumont
Ennis, Harry H., Manchester
Ensley, Bruce, Shell Rock (L.M.)
Entringer, Albert J., Dubuque
Entz, F. Harold, Waterloo
Erickson, Ernest D., Sioux City
Ericsson, Martin G., Cedar Falls
Erikson, Roland E., Davenport
Esders, Martin S., DeWitt
Estes, Maurice, Cedar Rapids
Evans, John E., Winterset
Evans, John G., New Hartford (L.M.)
Evans, William I., Sac City
Evers, Alvin E., Pella

Faber, Luke A., Dubuque
Fail, Charles S., Adel
Fallows, Howard D., Mason City (L.M.)
Farago, Denes S., Lake City
Farlow, Charles T., Farnhamville (L.M.)
Farnsworth, Harold E., Storm Lake
Farrage, Edward R., Council Bluffs
★Farrior, Richard T., Tampa, Florida
Faust, John H., Manson
Fee, Charles H., Denison
Fee, Knight E., Toledo
Feightner, Robert L., Fort Madison
Feldick, Harley G., Buffalo Center
Fellows, Joseph G., Ames
Felter, Allan G., Van Meter
Fenton, Charles D., Bloomfield
Fenton, Robert L., Centerville
Ferguson, John W., Newton
Ferguson, Paul, Lake City
Ferlic, Rudolph J., Carroll
Fesenmeyer, Charles R., Davenport
Fickel, Jack D., Red Oak
★Field, Charles A., Manhattan, Kansas
Field, Grace E. W., Juneau, Alaska
Fields, Robert B., LaPorte City (L.M.)
Fieseler, Walter R., Ford Dodge
Fieselmann, George F., Spencer
Files, Edward H., Cedar Rapids
Fillenwarth, Floyd H., Charles City
Fisch, Roman J., Le Mars
Fisher, June M., Iowa City
Fisher, William A., Creston
Fishman, Harlow J., Cherokee
Fisk, Charlotte, Des Moines
Fitch, Robert E., Des Moines
Fitzgerald, Joseph D., Sloan
Flannery, Francis E., Cedar Rapids
Flater, Norman C., Floyd
Fleming, Edward F., Rockwell
Flickinger, Roger R., Mason City
Flocks, Rubin H., Iowa City
Floersch, Eugene B., Council Bluffs
Floyd, Mark L., Iowa City
Flynn, Charles H., Clarinda
Flynn, Gordon A., Davenport
Flynn, James R., Jr., Cedar Rapids
Foley, Robert J., Davenport
Foley Walter E., Davenport
Foley, Walter E., Jr., Davenport
Forbes, Stephen A., Iowa City
Fordyce, Frank W., Des Moines
Forsythe, Dorothy C., Newton
Forsythe, Frank E., Newton
Foss, John F., Burlington
Foss, Robert H., Iowa City
Foster, Morgan J., Cedar Rapids
Foster, Samuel T., Adel (L.M.)
Foster, Warren H., Clinton
Foster, W. John, Cedar Rapids
Foster, Wayne J., Cedar Rapids
Foulk, Frank E., Backus, Minn. (L.M.)
Fowler, Willis M., Iowa City
Fox, Charles I., Pella (L.M.)
Fox, Ray A., Charles City
Fox, Stephan, Ottumwa
Franchere, Chetwynd M., Mason City
Franey, William E., Cedar Rapids
Frank, Louis J., Sioux City
Frank, Owen L., Maquoketa
Fraser, James B., Des Moines
Fraser, John H., Monticello
Frech, Raymond F., Newton
Frederickson, Adolph R., Lansing
Freed, David A., West Union
French, Royal F., Marshalltown
French, Valiant D., Cedar Falls
French, Vera V., Davenport
Frenkel, Hans S., Clarinda
Friday, Walter C., Burlington
Frink, Lyle F., Spencer
Frink, Lynn E., Reinbeck
Fritchen, Arthur F., Decorah
Fritz, Lafe H., Dubuque (L.M.)
From, Paul, Des Moines
Frost, Loraine H., Iowa City
Fry, Gerald A., Vinton
★Frys, Russell N., Iowa City
Fuerste, Frederick, Jr., Dubuque
Fullerton, Oscar L., Redding (L.M.)
Funk, David C., Iowa City
Furumoto, Kiyoshi, Keosauqua

Gaard, Rasmus R., Radcliffe (L.M.)
Galinsky, Leon J., Des Moines
Gallagher, John P., Oelwein
Gamet, Elmo E., Lamoni
*Gamet, Joseph H., Cedar Falls
Gangeness, Leonard G., Des Moines
Gann, Edward R., Sigourney
Gannon, James, Laurens
Gantz, A Jay, Greenfield
Ganzhorn, Harold L., Mapleton
Gardner, Harold O., Waterloo
Gardner, John R., Lisbon (L.M.)
Garland, John C., Marshalltown
Garred, John L., Whiting
★Garred, William P., San Francisco, Calif.
Garvy, Andrew C., Iowa City
Gauger, John W., Early
Gaukel, Leo A., Onawa
Gault, James B., Creston
Gearhart, George W., Springville (L.M.)
Gee, Kenneth J., Shenandoah
Gelfand, Arthur B., Sioux City
Gelfand, Ben B., Sioux City
Gelman, Webster B., Iowa City
Gelperin, Abraham, Des Moines
George, Everett M., Des Moines
George, Louis A., Remsen
Gerard, Russell S., II, Waterloo
Gerken, James F., Waterloo
Gernsey, Merritt N., Long Beach, Calif. (L.M.)
Gerstman, Herbert, Marion
Gessford, Howard H., George
Getty, Everett B., Primghar
Gibbon, Wm. H., Sioux City
Gibbs, George M., Burlington
Gibson, Chelsea D., Sac City
Gibson, Douglas N., Des Moines
Gibson, Paul E., Des Moines
Gibson, Preston E., Davenport
Giegerich, Walter F., Atlantic
Gildea, Dorothy J., Davenport
★Giles, Francis E., Fort Bragg, N. C.
Giles, W. Clark, Council Bluffs
Gilfillan, Clarence, D. N., Bloomfield
Gilfillan, Earl E., Bloomfield
Gilfillan, Edwin O., Bloomfield
Gilfillan, Homer J., Jr., Bloomfield
Gillett, Francis A., Oskaloosa (L.M.)
Gillett, R. Giles, Sigourney
Gillies, Carl L., Iowa City
Gillmor, Benjamin F., Red Oak (L.M.)
Gingles, Earl E., Onawa
Ginzberg, Fanny T., Cherokee
Gittins, Thomas R., Sioux City
Gittler, Ludwig, Fairfield
Gius, John A., Iowa City
Givens, H. Frank, West Bend (L.M.)
★Gleeson, John J., Vail
Glenchur, Thomas C., Des Moines
Glesne, Otto N., Fort Dodge
Glick, Julius, Clinton
Glissman, Jean B., Des Moines
Glomset, Daniel A., Des Moines
Glomset, Daniel J., Santa Barbara, Calif. (L.M.)
Goad, Robley R., Muscatine
Godbey, Maunis E., Fort Madison
Goddard, Chester R., Iowa City
Goddard, William B., Iowa City
Goebel, Clarence J., Sioux City
Goen, Edwin J., Charles City
Goenne, Richard E., Davenport
Goenne, Wm. Carl, Sr., Davenport
Goggin, John G., Ossian
Goldberg, Louis, Des Moines
Goldman, Bernard R., Davenport
Goldstein, Morton S., Iowa City
Goodenow, Sidney B., Colo
Goodman, Lawrence O., Marshalltown
Gordon, Arnold M., Des Moines
Gorrell, Ralph L., Clarion
Goslin, Fred B., Iowa City
Gottsch, Edwin J., Shenandoah
Gould, George R., Grundy Center (L.M.)
Gower, Walter E., Fort Dodge
Grady, Edmund M., West Bend
Graham, James W., Sioux City
Grams, La Verne F., Iowa City
Grandinetti, Arthur F., Oelwein
Grant, John G., Ames
Grau, Amandus H., Denison
Graves, Charles C., Jr., Des Moines
Graves, John P., Dubuque
Gray, Charles W., Ottumwa
Gray, Gordon W., Des Moines
Gray, John F., Melcher (L.M.)
Gray, Henry A., Keokuk (L.M.)
Gray, Ralph E., Eldora
Greco, Donald J., Los Angeles, Calif.
Green, Don C., Graettinger
Green, John W., Jr., Des Moines
Greenblatt, Jerald, Cedar Rapids
Greenhill, Solomon, Des Moines
Greenleaf, John S., Iowa City
Gremel, Norman A., Iowa City
Greteman, Theodore J., Dubuque
Griffin, Charles C., Dyersville
Griffin, Frank L., Baldwin (L.M.)
*Griffin, John M., Des Moines (L.M.)
Griffin, Robert E., Sheldon
Griffith, Thomas L., Mason City
Griffith, Wylie H., Clinton
Griffith, William O., Council Bluffs
Grimmer, George T., Charles City
Groben, Elmer S., Columbus Junction
Gross, Richard L., Iowa City
Grossman, Milton D., Sioux City
Grossman, Raymond S., Marshalltown
Grossmann, Edward B., Orange City
Grothaus, Dell L., Delta
Grubb, Merrill W., Galva
Gugle, Lloyd J., Ottumwa
Gunn, Ross E., Boone (L.M.)
Gurau, Henry H., Des Moines
Gustafson, John E., West Des Moines
Gutch, Roy C., Chariton
Gutch, Thomas E., Albia (L.M.)
Gutenkauf, Charles H., Des Moines

★Hach, Felix T., Ankeny
Hagen, Edward F., Decorah
Haggar, David K., Hawarden
Haines, Diedrich J., Des Moines
Hake, Dexter H., Knoxville
Hale, Albert E., Mason City
Hall, Bonnybel A., Maynard
Hall, Cluley C., Maynard
Hall, Forest F., Webster City
Hallam, F. Tulley, Des Moines
Hallberg, Harold C., Oelwein
Halloran, William H., Audubon
Halpin, Lawrence J., Cedar Rapids
Hamilton, Benjamin C., Jefferson
Hamilton, Cecil V., Garner
Hamilton, Henry E., Iowa City
Hamilton, William K., Iowa City
Hansell, William W., Des Moines
Hansen, Fred A., Red Oak
*Hansen, Hans, Logan
Hansen, Niels M., Des Moines
Hansen, Robert R., Marshalltown
Hansen, Russell R., Storm Lake
Hanske, Edward A., Burlington
Hanson, Carl A., Waterloo
Hanson, Henry M., Waverly
Hanssmann, Irving J., Council Bluffs
Hardin, John F., Bedford
Hardin, Robert C., Iowa City
Hardwig, Oswald C., Waverly
Hardwig, Robert P., Waverly
Harken, Conreid R., Osceola
Harkness, Gordon F., Davenport (L.M.)
Harman, Dean W., Glenwood
Harms, George E., Norway
Harnagel, Edward J., Des Moines
Harper, George, Fort Madison
Harper, Harry D., Fort Madison
Harper, William H., Keokuk
Harper, William H., Jr., Keokuk

Harrington, Arlan F., Cedar Rapids
Harrington, Louis E., Danbury
Harrington, Raymond J., Sioux City
Harris, D. Dale, Marshalltown
Harris, Grove W., Marshalltown (L.M.)
Harris, Herbert H., Sioux City
Harris, Jack T., LuVerne
Harris, Ray R., Dubuque
Hart, Paul V., Des Moines
Hartley, Byron D., Mount Pleasant
Hartman, Frank T., Waterloo (L.M.)
Hartman, Howard J., Waterloo
Hartung, Walter, Davenport
Harvey, Glen W., Cedar Rapids
Harwood, Arthur M., Sigourney
★Hastings, Richard A., Pensacola, Fla.
Haufe, W. David, Bloomfield
Havlik, Al J., Tama
Hawkins, Charles P., Clarion
Hayden, Milford D., Marcus
Hayes, Wm. P., Cedar Rapids
Hayne, Willard W., Des Moines
Hazlet, Kenneth K., Dubuque
Hea, James J., Guttenberg
Heady, Conda C. C., Bloomfield (L.M.)
Heald, Clarence L., Sigourney (L.M.)
Heathman, Frank E., Pocahontas (L.M.)
Hecker, John T., Cedar Rapids
Heeren, Ralph H., Des Moines
Heffernan, Chauncey E., Sioux City
★Heffron, John F., Rapid City, S. D.
Hegg, Lester R., Rock Valley
Hegstrom, George J., Ames
Heilman, Elwood H., Ida Grove
Heilman, Robert D., Sioux City
Heimann, Verne R., Sioux City
Heise, Carl A., Jr., Jewell
Heise, Harris R., Marshalltown
Heise, Robert H., Story City
Heitzman, Paul O., Cedar Rapids
Heles, John B., Dubuque (L.M.)
Helling, Harry B., Fort Madison
Helt, Vernon G., Moville
Henderson, Lauren J., Cedar Falls
Henderson, Walker B., Oelwein
Hendricks, Atlee B., Davenport
Hendrickson, Alvin H., Sioux City
Henkin, John H., Sioux City
Hennes, Raphael J., Oxford
Hennessey, John M., Manilla
Hennessy, Felix A., Calmar
Hennessy, J. Donald, Council Bluffs
Henningsen, Artemis B., Clinton
Henry, Clyde A., Farson (L.M.)
Henry, Hiram B., Des Moines
Henstorf, Harold R., Shenandoah
Herman, John C., Boone
Henry, Peter, Prairie City
Herrick, Thomas G., Gilmore City
Herrick, Walter E. Ottumwa
Herrmann, Christian H., Jr., Amana
Hersey, Nelson L., Independence
Hess, John, Jr., Des Moines
Heuermann, Dorothy J., Coulter
Heusinkveld, Henry J., Clinton
Hickenlooper, Carl B., Winterset
Hickey, Robert C., Iowa City
Hicks, Wayland K., Sioux City
Hildebrand, Howard H., Ames
*Hill, Christine E., Virginia Beach, Va. (L.M.)
Hill, Don E., Clinton
Hill, James W., Mount Ayr
Hill, Julia Ford, Santa Barbara, Calif. (L.M.)
Hill, Lee F., Des Moines
Hill, Richard W., Lake Mills
Hines, Ralph E., Des Moines
Hirleman, Hal R., Cedar Rapids
Hirsch, Harry N., Sioux City
Hirst, Donald V., Council Bluffs
★Hodges, Robert E., Silver Spring, Md.
Hoeven, Edward B., Ottumwa
Hoffman, Paul M., Tipton (L.M.)
Hoffmann, Robert W., Des Moines
Hofmann, William P., Davenport
★Hogenson, George B., Eagle Grove
Hollander, Werner M., Davenport
Hollis, Edward L., Marengo (L.M.)
Holloway, Ralph J., Iowa City
Holtey, Joseph W., Ossian
Hombach, Walter P., Council Bluffs
Hommel, Placido R. V., Elkader
Honke, Edward M., Sioux City
Hooper, Lester E., Indianola
Hopkins, David H., Glidden
Hornaday, William R., Des Moines
Hornberger, John R., Manning
Horst, Arthur W., Sioux City
Horton, Robert R., Algona
Hosford, Horace F., Burlington
Hospodarsky, Leonard J., Des Moines
Hostetter, John I., Des Moines
Houghton, Earl J., Bettendorf
Houlahan, Jay E., Mason City
Houlihan, Francis W., Ackley
Houser, Blanche W., Cedar Rapids
Houser, Cass T., Cedar Rapids (L.M.)
Housholder, Harold A., Winthrop (L.M.)
Howar, Bruce F., Webster City
Howard, Dwayne E., Sioux City
Howard, Lloyd G., Council Bluffs
★Howe, Gerald W., Grosse Ile, Michigan
Howell, David A., Dubuque
Howell, Elias B., Ottumwa
Hoyt, John L., Creston
Hruska, Glen J., Belmond
Huber, Robert A., Charter Oak
Huber, Robert H., Osage
Hubiak, John, Odebolt
Hudek, Joseph W., Garnavillo
Huey, John R., Cedar Rapids
Huffman, William C., Iowa City
Hughes, Parker K., Des Moines
Hughes, Robert O., Ottumwa
Hughet, Keith, Osage
Hull, Gene I., Des Moines
Hull, Henry C., Jr., Washington (L.M.)
Hulse, Roy A., Burlington
Hunt, Van W., Mason City
Hunting, Ralph D., Cedar Rapids
Huntley, Charles C., Avoca
Hurevitz, Hyman M., Davenport
Huston, Daniel F., Burlington
Huston, Marshall D., Cedar Falls
Huston, Paul E., Iowa City
Hyatt, Charles N., Humeston
Hyde, John R., Emmetsburg

Ihle, Charles W., Cleghorn (L.M.)
Ingham, Paul G., Mapleton
Ingle, Newell G., Cedar Rapids
Ingraham, David R., Sewal
Irish, Thomas J., Forest City
Irving, Nobel W., Jr., Des Moines
Isenberg, Bertice A., Lohrville

Jack, Darwin B., Oelwein
Jackson, James M., Jefferson (L.M.)
Jackson, James S., Mount Pleasant
Jacobs, Carl A., Sioux City
Jacobs, Edward L., Conrad
Jacoby, James A., Burlington
Jacques, Lewis H., Lone Tree
Jaenicke, Kurt, Clinton (L.M.)
Jaggard, Robert S., Oelwein
James, Audra D., Des Moines
James, David W., Des Moines
James, Lora D., Fairfield
James, Peter E., Audubon (L.M.)
Janse, Phillip V., Algona (L.M.)
January, Lewis E., Iowa City
Jaquis, John R., Reinbeck
Jardine, George A., New Virginia
Jarvis, Harry D., Chariton
Jaskunas, Stanley R., Bloomfield
Jeffries, James H., Waterloo
Jeffries, Milo E., Marshalltown
Jeffries, Roy R., Waukon
Jenkins, George A., Albia (L.M.)
Jenkins, George D., Burlington
Jenkins, Hanley F., Ogden
Jenkinson, Harry R., Iowa City
Jenks, Alonzo L., Jr., Des Moines
Jensen, Kenneth V., Clarinda
Jensen, LeRoy E., Audubon
Jerdee, Ingebrecht C., Clermont
Jerome, Peter, Muscatine
Jessup, Parke M., Muscatine
Jirsa, Harold O., Cedar Rapids
Johann, Albert E., Des Moines
Johnson, Aaron Q., Sioux City
*Johnson, Albert P., Sigourney (L.M.)
Johnson, Clarence A., Coon Rapids
Johnson, Francis N., Des Moines
Johnson, G. Raymond, Ottumwa
*Johnson, George M., Oberlin, Ohio (L.M.)
Johnson, Harvey A., Atlantic
Johnson, Merlin H., Seattle, Washington
Johnson, Merton A., Nevada
Johnson, Norman M., Clarinda
Johnson, Richard M., Denison
Johnson, Robert J., Iowa Falls
Johnson, Robert M., Des Moines
Johnson, Robert W., Atlanta, Georgia
Johnson, Victor P., Des Moines
Johnson, William A., Iowa Falls
Johnston, Edward V., Waterloo
Johnston, C. Harlan, Des Moines
Johnston, Florence D., Cedar Rapids
Johnston, George B., Estherville
Johnston, Harry L., Ames
Johnston, Helen, Des Moines
Johnston, James P., Des Moines
Johnston, Kenneth L., Oskaloosa
Johnston, Theodore L., Iowa City
Johnston, Wayne A., Dubuque
Johnstone, Alexander A., Keokuk
Jolly, William P., Iowa City
Jones, Cecil C., Des Moines
Jones, Charles L., Gilmore City
Jones, Clare C., Spencer
Jones, Harold W., Sioux City
Jones, Harry J., Cedar Rapids (L.M.)
Jones, Maynard L., Colfax
Jongewaard, Albert J., Jefferson
Jongewaard, Jean, Jefferson
Jongewaard, Robert E., Scranton
Joranson, Robert E., Council Bluffs
Jordan, John W., Maquoketa
Jowett, John R., Clinton
Joyce, George T., Mason City
Joynt, Albert J., Waterloo
Joynt, Martin J., Le Mars
Joynt, Michael F., Marcus
★Judiesch, Kenneth J., San Antonio, Texas
Juel, Einer M., Atlantic

Kaack, Harry F., Jr., Clinton
Kadesky, Melvin C., Iowa City
Kahler, Hugo V., Reinbeck (L.M.)
Kane, Thomas E., Boone
Kanealy, John F., Cedar Rapids
Kapke, Franklin W., Mason City
Kaplan, David D., Sioux City
Kaplan, Robert M., Davenport
Kasiske, Walter B., Keokuk
Kassmeyer, John C., Dubuque
Kast, Donald H., Des Moines
Katzmann, Frederick S., Des Moines
Kauffman, William A., Marshalltown (L.M.)
Keane, Kenneth M., Sioux City
Keech, Roy K., Cedar Rapids (L.M.)
Keen, Burlin E., Des Moines
Keeney, George H., Mallard
Keettel, William C., Iowa City
Kehoe, Joseph L., Davenport
★Keil, Philip G., Maxwell AFB, Alabama
Keith, Charles W., Strawberry Point (L.M.)
Keith, John J., Marion
Kelberg, Melvin R., Sioux City
Kelley, Edmund J., Des Moines
Kelley, Lawrence E., Des Moines (L.M.)
Kelly, Anthony H., Sioux City
Kelly, Dennis H., Des Moines
Kelly, John F., Sioux City
Kelly, William J., Dubuque
Kelsey, James E., Des Moines
Kemp, Robert R., Keokuk
Kenefick, John N., Algona
Kennedy, Elizabeth S., Oelwein (L.M.)
Kenney, Bernard E., Woodbine
Keohen, Gerald F., Dubuque
Kern, George A., Des Moines
Kern, Lester C., Waverly (L.M.)
Kerr, H. Dabney, Iowa City
Kerr, Kriss M., Paton
Kerr, W. Hawley, Hamburg
Kershner, Frank O., Clinton
Kersten, Ernest M., Fort Dodge
Kersten, Herbert H., Fort Dodge
Kersten, John R., Fort Dodge
Kersten, Paul M., Fort Dodge
Kerwick, Joseph M., New Hampton
Kestel, John L., Waterloo
Kettelkamp, Enoch G., Monona
Keyser, Earl L., Marshalltown
Keyser, Ralph E., Marshalltown
Kieck, Ernest G., Cedar Rapids
Kienzle, William K., Wellsburg
Kiesau, Milton F., Postville
Kiesling, Harry F., Lehigh
Kilgore, Ben F., Des Moines
Kimball, John E., West Liberty
Kimberly, Lester W., Davenport
King, Dean H., Spencer
King, Oran W., Des Moines (L.M.)
King, Ross C., Clinton
Kingsbury, Charles L., Keokuk
Kingsbury, Kenneth R., Ottumwa
Kirch, Walter A., Des Moines
*Kirkegaard, C. Smith, Estherville
Kirkendall, Walter M., Iowa City
Kirkham, Lindsay J., Mason City
Kitson, Walter W., Atlantic
Klein, John L., Jr., Muscatine
Klein, Robert F., Muscatine
Kleinberg, Henry E., Des Moines
Kline, Samuel, Sioux City
Klocksiem, Harold L., Des Moines

Klocksiem, Roy G., Rockwell City
Klok, George J., Council Bluffs
Kluever, Herman C., Fort Dodge
Knight, Benjamin L., Cedar Rapids
Knight, Edson C., Marshalltown
Knight, Russell A., Rockford
Knipfer, Robert L., Jesup
Knosp, Norman C., Belle Plaine
★Knouf, Clare E., Portland, Oregon
Knott, Peirce D., Sioux City
Knox, James M., Cedar Rapids (L.M.)
Knudsen, Hubert K., Boulder, Colo.
Knutsen, Arne, Sioux City
Koelling, Lloyd H., Newton
Kohrs, Edward F., Davenport
Koontz, Lyle W., Vinton
Kopecky, Edward F., Cedar Rapids
Kopsa, Walter J., Tipton
★Koptick, George, Jr., Sault Ste. Marie, Michigan
Korfmacher, Edwin S., Grinnell
Kornder, Louis H., Davenport
Korns, Horace M., Iowa City
Kos, Clair M., Iowa City
Koser, Donald C., Cherokee
Krause, Robert E., Ottumwa
Krepelka, George E., Osage
Krettek, John E., Council Bluffs
Krigsten, Joe M., Sioux City
Krigsten, William M., Sioux City
Kroack, Kalman J., Buffalo Center
Kruckenberg, William G., Cedar Rapids
Krueger, Norman L., Duluth, Minn.
Kruml, Joseph G., Council Bluffs
Kruse, Otto E., Tipton
★Krause, Rufus H., Pearl Harbor, Hawaii
Kuehn, Willard G., Clarinda
Kuhl, Augustus B., Davenport (L.M.)
Kuhl, Augustus B., Jr., Davenport
Kuhl, Robert H., Creston
Kuhn, Mark A. R., Waterloo
Kuker, Leo H., Carroll
Kulp, Raymond R., Davenport (L.M.)
Kurtz, Cecilia M., Cedar Rapids
Kyle, William S., Washington (L.M.)

Lagen, Mansfield S., Dubuque
Lagoni, Ralph P., Eldridge
LaMaster, Hugh, Primghar
Lamb, Frederick H., Davenport
Lamb, Harry H., Davenport
Lambrecht, Paul B., Des Moines
Lande, Jacob N., Sioux City
Langworthy, Henry G., Dubuque (L.M.)
Lannon, James W., Mason City
Larimer, Robert C., Sioux City
Larimer, Robert N., Sioux City
Larsen, Elmer A., Centerville
Larsen, Frank S., Fort Dodge
Larsen, Harold T., Fort Dodge
Larsen, Lawrence V., Harlan
Larson, Andrew G., Dickens (L.M.)
Larson, Carroll B., Iowa City
Larson, Erling, Jr., Davenport
★Larson, Gerald E., New York, N. Y.
Larson, Lester E., Decorah
Larson, Marvin O., Hawarden
LaRue, Jack L., Anita
Latchem, Charles W., Des Moines
Latimer, Milton J., Burlington
Laube, Paul J., Dubuque
Laughlin, Ralph M., Cedar Rapids
Lauvsted, Edward E., Osceola
Lavender, John G., George
★Lawler, Matthew P., Jr., Corona, Calif.
Lawlor, Jeremiah F., Cherokee
Lawrence, Joseph W., Arcadia, Florida
Layton, Jack M., Iowa City
Leander, Richard B., Council Bluffs
Lederman, Joseph, Oskaloosa
Lee, Robert W., Burlington
Lee, Wayne R., Burlington
Leehey, Paul J., Independence
Leffert, Frank B., Centerville
Lehman, Emery W., Bluffton, Indiana (L.M.)
Lehr, Sylvan M., Cedar Rapids
Leighton, Lewis L., Fort Dodge
Leinbach, Samuel P., Belmond
Leinfelder, Placidus J., Iowa City
Leiter, Herbert C., Sioux City
Lekwa, Alfred H., Story City
Lemke, Betty A. T., Des Moines
Lemon, Kenneth M., Oskaloosa
*Lenaghan, Robert T., Clinton
Lenzmeier, Albert J., Davenport
Leonard, Frederick S., Dubuque (L.M.)
Leonard, Thurman K., Madrid
LePoidevin, Jean S., Waterloo
Levy, James W., Sioux City
Lewis, Bernard I., Iowa City
Lewis, Faye C., Webster City
Lewis, William B., Webster City
Lichter, Theodore W., Edgewood
Lierle, Dean M., Iowa City
Lierman, Clifford E., Lake View
Liken, John A., Creston
Limbert, Edwin M., Council Bluffs
Limburg, J. Irwin, Jefferson
Limburg, John I., Jr., Jefferson
Lincoln, Simon E., Des Moines (L.M.)
Lindell, Sherman E., Le Mars
Linder, Enfred E., Ogden
Lindholm, Claire V., Armstrong
Lindley, Ellsworth L., Cedar Rapids
Linge, Scott, Fayette
Liska, Edward J., Ute
Lister, Eugene E., Dallas Center
Lister, Kenneth E., Ottumwa
Little, Luther W., Atkins
Lloyd, John M., Washington
Locher, Robert C., Cedar Rapids
Lockhart, Harold A., Cedar Rapids
Lodwick, Gwilym S., Jr., Iowa City
Loeck, John F., Independence
Loes, Anthony M., Dubuque
Lohman, Frederick H., Waterloo
Lohmann, Carl J., Burlington
Lohr, Phillips E., Churdan
Long, Draper L., Mason City
Long, Llewelyn L., Atlantic
Longworth, Wallace H., Boone
Loomis, Frederic G., Waterloo
Lorfeld, Gerhard Wm., Davenport
Losasso, David A., Davenport
Loseke, Margaret J., Des Moines
Losh, Clifford W., Des Moines (L.M.)
Losh, Clifford W., Jr., Des Moines
Love, Francis L., Iowa City (L.M.)
Lovejoy, E. Parish, Des Moines
Loving, Luther W., Estherville
Lowry, Charles F., Council Bluffs
Loxterkamp, Edward O., Rolfe
Lueck, Arthur G., Des Moines
Luehrsmann, Bernard C., Dyersville
Luke, Edward, Coin (L.M.)
Lulu, Donald J., Des Moines
Lundvick, Arthur W., Iowa City (L.M.)
Luse, Ralph F., Clinton
Lutton, John D., Sioux City
Lyman, Frank L., Jr., Fort Madison
Lynberg, Raymond A., Lake City
*Lynn, Arthur R., Marshalltown (L.M.)
Lynn, Clarence E., Dubuque
Lyon, John D., McGregor
Lyons, Mary Louise, Des Moines

MacGregor, John K., Mason City
MacLeod, Hugh G., Greene
MacQueen, John C., Iowa City
McAllister, William G., Manly
McBride, James T., Des Moines (L.M.)
McBride, Robert H., Sioux City
McCaffrey, Eugene H., Des Moines
McCall, John H., Allerton
McCarthy, Frank D., Sioux City
McClean, Earl D., Des Moines
McClellan, John W., Onawa
McClintock, John T., Iowa City (L.M.)
McClintock, Robert S., Iowa City
McClure, Gail A., Ames
McClurg, Frank H., Fairfield
McConkie, Edwin B., Cedar Rapids
McConkie, Willis L., Carroll
McConnell, Robert W., Davenport
McCool, Robert F., Clarion
McCoy, Harold J., Des Moines
McCoy, John T., Cedar Falls
McCrary, W. Ashton, Lake City
McCreedy, Murry L., Washington
McCreight, George C., Des Moines
McCuistion, Harry M., Sioux City
McDonald, Don J., Cedar Rapids
McDowall, Gilbert T., Gladbrook (L.M.)
McDowell, William O., Grundy Center (L.M.)
McEleney, Donald A., Iowa City
McFadden, F. Ross, Davenport
McFarland, Guy E., Ames
McFarland, Guy E., Jr., Ames
McFarland, Julian E., Ames
McGahey, William B., Webster City
McGarvey, Cornelius J., Des Moines
McGeehon, Robert C., Indianola
McGilvra, Arthur L., Sioux Center
McGinnis, George C., Fort Madison
McGrane, Merle J., New Hampton
McGuire, Kenneth L., Keota
McGuire, Roy A., Fairfield
McHugh, Charles P., Sioux City
McIllece, Raymond C., Fort Madison
McIntosh, Philip D., Ottumwa
McIntyre, Caryl C., Waterloo
McKay, Richard V., Jr., Dubuque
McKean, Frank F., Allison
McKittrick, John C., Burlington
McLaughlin, Charles W., Washington (L.M.)
McMahon, Arthur E., Jr., Mason City
McMahon, Thomas, Garner (L.M.)
McMeans, Thomas W., Davenport
McMillan, George J., Fort Madison
McMillan, James T. III, Des Moines
McMurray, Edward A., Newton
McMurray, Harry N., Burlington
McNamara, Robert J., Dubuque
McNamee, Jesse H., Des Moines
McQuiston, J. Stuart, Cedar Rapids
McTaggart, William B., Fort Dodge
McVay, Melvin J., Lake City
Mackin, M. Charles, Des Moines (L.M.)
Macrae, James G., Creston (L.M.)
Macy, William W., Iowa City
Magee, Emery E., Waterloo
Mahoney, James D., Council Bluffs
Mailliard, Robert E., Storm Lake
Maixner, William D., Ottumwa
Maland, Donald O., Cresco
Malench, Henry L., Eldridge
Maloy, Wayland H., Shenandoah
Manderscheid, Robert A., Boone
Mangan, J. Thomas, Forest City
Manning, Ephraim L., Davenport
Manson, Gordon, Des Moines
Manthey, Charles E., Waterloo
Mantle, William B., Albion (L.M.)
Maplethorpe, Charles W., Toledo
Maplethorpe, Charles W., Jr., Toledo
Marble, Edwin J., Marshalltown
Marble, Pearl L., Liscomb (L.M.)
Marble, Willard P., Marshalltown
Marguiles, Harold, Des Moines
Marinos, Harry G., Mason City
Maris, Cornelius, Sanborn
*Maris, Gerrit, Sioux City
Maris, William, Sioux Center
Mark, Edward M., Clarksville
Mark, Milton S., Des Moines
Marker, John I., Davenport
★Marme, George W., DeWitt
Marquis, Fred M., Waterloo
Marquis, George S., Des Moines
Marsh, Frederick E., Council Bluffs
Marsh, Frederick E., Jr., Council Bluffs
Marshall, Jean A., Solon
Martin, James W., Holstein
Martin, Josef R., Carroll
Martin, Lee R., Council Bluffs
Martin, Ronald F., Sioux City
Martin, Sidney D., Carroll (L.M.)
Martini, Henry F., Council Bluffs
Mason, Edward E., Iowa City
Mason, Robert P., Des Moines
Mason, Stella M., Mason City (L.M.)
Mast, Truman M., Washington
Mater, Dwight A., Knoxville
Matheson, John H., Des Moines
Mathiasen, Aileen E., Council Bluffs
Mathiasen, Emmett B., Council Bluffs
Mathiasen, Henning W., Council Bluffs
Mathiasen, John W., Council Bluffs
Matthey, Carl H., Davenport
Matthey, Walter A., Davenport
Mattice, Lloyd H., Sheldon
Mattice, Roger J., Sioux Rapids
Mauritz, Emory L., Des Moines
Maxwell, Charles T., Sioux City
Maxwell, John, What Cheer
★Maxwell, John R., Tacoma, Wash.
May, Charles D., Iowa City
May, George A., Des Moines
Mazur, Theodore T., Burlington
Meffert, Clyde B., Cedar Rapids
Megorden, William H., Mount Pleasant
Mehrl, William J., Manchester
Mellen, Robert G., Clinton
Meredith, Loren K., Des Moines
Merillat, Herbert C., Des Moines
Merkel, Arthur E., Des Moines (L.M.)
Merkel, Byron M., Des Moines
Merritt, Arthur M., Des Moines (L.M.)
Merritt, F. Benjamin, Dubuque
Merritt, James O., Des Moines
Merselis, Harold K., Audubon
Mershon, Clinton E., Adel, (L.M.)
Meyer, Alfred K., Clinton
★Meyer, Paul G., New York, N. Y.
Meyers, Frank W., Dubuque (L.M.)
Meyers, Paul T., Bloomfield
Meyers, Robert P., Ottumwa

Michaelson, Don, Boone
Michelfelder, Theodore J., Fort Dodge
Middleton, William H., Cedar Rapids
Mikelson, Clarence J., Waterloo
Miller, Chester I., Iowa City
Miller, Donald F., Williamsburg
Miller, Enos D., Wellman
Miller, Garfield, Calmar
Miller, Howard L., Cedar Rapids
Miller, Jay R., Wellman
Miller, Lawrence A., North English
Miller, Lawrence A. II., North English
Miller, Richard L., Waterloo
Miller, Robert C., Waterloo
Miller, Temple M., Muscatine
Miller, Wilbur R., Iowa City
Millice, Glenn S., Battle Creek
Mills, Frank W., Ottumwa (L.M.)
Miltner, Leo J., Davenport
Minassian, Harootune A., Des Moines (L.M.)
Minassian, Thaddeus A., Des Moines (L.M.)
Miner, James B., Charles City
Mirick, Donald F., Clinton
Mitchell, Claire H., Cincinnati
Mitchell, Duane E., Mount Ayr
Mitchell, Richard C., Waterloo
Moberly, John W., Dubuque
Mochal, Milo A., Iowa City
Moe, Ralph H., Griswold
Moen, Stanley T., Cedar Rapids
Moerke, Robert F., Burlington
Moermond, James O., Hull
Moershel, Henry G., Homestead
Moershel, William J., Cedar Rapids
Moessner, Harold, Amana
Moessner, Samuel F., Lincoln, Nebraska
Monnig, Philip J., Sioux City
★Montgomery, Albert E., Phoenixville, Pa.
Montgomery, George E., Ames
Montgomery, Guy E., Washington
Moon, Barclay J., Cedar Rapids
Mooney, James C., Des Moines
Moore, Carlyle C., Emmetsburg
Moore, Edson E., Fort Dodge
Moore, Jesse C., Eldon (L.M.)
Moore, Pauline V., Iowa City
Moore, Richard M., Des Moines
Moorehead, Harold B., Underwood
Mordaunt, Richard H., Nevada
Morgan, Francis W., Ottumwa
Morgan, Harold W., Mason City
Morgan, Jack N., Fairfield
Morgan, Paul W., Mason City
Morgan, Rex L., Sioux City
Morganthaler, Otis P., Templeton (L.M.)
Moriarty, Darwin L., Council Bluffs
Morrison, Arthur F., Iowa City
Morrison, John R., Glidden
Morrison, John W., Alta (L.M.)
Morrison, Robert E., Waterloo
Morrison, Roland B., Carroll
Morrison, Wesley J., Cedar Rapids (L.M.)
Morrissey, George E., Davenport
Morrissey, William J., Des Moines
Morse, Charles H., Eagle Grove (L.M.)
Mosher, Martin L., Jr., Iowa City
Mott, William H., Farmington (L.M.)
Mountain, George E., Des Moines
Moyers, Jack, Iowa City
Mugan, Robert C., Sioux City
Mullmann, Arnold J., Oakland, Nebraska
Mulry, William C., Carroll
Mulsow, Frederick W., Cedar Rapids
Munger, Elbert E., Jr., Spencer
Munns, Richard E., Hampton
Murchison, Kenneth, Sidney (L.M.)
Murphey, Arlo L., Fredericksburg
Murphy, Cornelius B., Alton
Murphy, George C., Waterloo
Murphy, James H., Des Moines
Murray, Frederick G., Cedar Rapids (L.M.)
Murray, Jonathan H., Burlington
Murtaugh, James E., New Hampton
Myerly, William H., Des Moines
Myers, Edward M., Boone, (L.M.)
Myers, Kermit W., Sheldon
Myers, Robert W., Monticello

Nakashima, Victor K., Dubuque
Nash, Edwin A., Ottumwa (L.M.)
Nash, Warren, Waterloo
Nauman, Ernest C., Waterloo
Neal, Emma J., Cedar Rapids (L.M.)
Nederhiser, Morgan I., Cascade
Needles, Roscoe M., Atlantic
Neff, Herbert, La Plata, Puerto Rico
Neglia, Fortunato J., Maxwell
Neligh, Gordon L., Jr., Council Bluffs
Nelken, Leonard, Clinton
Nelson, Arnold L., Des Moines
Nelson, Frederick L., Ottumwa (L.M.)
Nelson, F. Lawrence, Jr., Ottumwa
Nelson, Leo C., Jefferson
Nelson, Norman B., Iowa City
Nelson, Paul O., Emmetsburg
Nelson, Robert J., Clinton
Nemec, Joseph J., Cedar Rapids
Nemmers, Gerald J., Washington
Netolicky, Robert Y., Cedar Rapids
Neufeld, Robert J., Davenport
Neuzil, William J., Cedar Rapids
Newland, Don H., Belle Plaine
Newland, Donald O., Des Moines
Newman, Robert W., Iowa City
Niblock, George F., Denver, Colorado (L.M.)
Nicholson, Clyde G., Des Moines
Nicoll, Charles A., Panora
Nicoll, David T., Mitchellville (L.M.)
Nielsen, Arnold T., Ankeny
★Nielsen, Glen E., Seattle, Washington
Nielsen, Rudolph F., Cedar Falls
Nielson, Arthur L., Council Bluffs
Niemann, Theodore V., Brooklyn
Nierling, Paul A., Cresco
Nitzke, Everett A., Des Moines
Noble, Earl H., Clemons (L.M.)
Noble, Nelle S., Des Moines (L.M.)
Noble, Rusl P., Alta
Noe, Carl A., Cedar Rapids
Noe, Charles F., Amana (L.M.)
Nolan, John C., Corning
Nomland, Ruben, Iowa City
Noonan, James J., Marshalltown
Nord, Donald M., Cambridge
Nordin, Charles A., Des Moines
Nordschow, Carleton D., Iowa City
Norris, Lewis D., Newton
North, Frank R., Winfield (L.M.)
Noun, Louis J., Des Moines
Noun, Maurice H., Des Moines
Nyquist, David M., Eldora

Ober, Frank G., Burlington
O'Brien, Lyal J., Fort Dodge
O'Brien, Stephen A., Mason City
O'Brien, Stephen A., Jr., Dubuque
O'Connor, Edwin C., New Hampton
Odell, James E., Iowa City
O'Donnell, Joseph E., Clinton
O'Donoghue, Archibald F., Sioux City
O'Donoghue, James H., Storm Lake (L.M.)
Oelrich, Carl D., Sioux Center
Oggel, Herman D., Maurice (L.M.)
O'Keefe, Paul T., Waterloo
O'Leary, Francis B., Sibley
Olin, Elvin E., Dubuque
Olsen, Martin I., Des Moines (L.M.)
Olsen, Max E., Minden
Olsen, Ranald E., Milton
Olson, Evelyn M., Winterset
Olson, Russell L., Northwood
★Olson, Stewart O., Des Moines
O'Neal, Harold E., Tipton
Orcutt, Paul E., Marion
Orelup, Don N., Albia
Orton, Lawrence C., Mason City
Osborn, C. Robert, Dexter
Osincup, Paul W., Sioux City
Osten, Burdette H., Northwood
Ostler, Howard B., Iowa City
O'Toole, Laurence C., Le Mars
O'Toole, Roger L., Waterloo
Ottilie, Donald J., Oelwein
Otto, Paul C., Fort Dodge
Owca, Anthony S., Centerville
Owen, William E., St. Ansgar

Pace, Arthur A., Toledo (L.M.)
Page, Elizabeth B., Iowa City
Pagelson, Otto H., Des Moines (L.M.)
Pahlas, Henry M., Dubuque
Paige, Ralph T., La Porte City
Painter, J. Carl, Dubuque
Palcheff, Christ L., Fairfield
Palmer, Carson W., Guttenberg
Palmer, Howard C., West Liberty
Palumbo, Louis T., Des Moines
Paragas, Modesto R., Creston
Parish, John R., Grinnell
Parke, John, Cedar Rapids
Parker, H. Graham, Hampton
Parker, Loran F., Iowa Falls
Parker, Robert L., Des Moines
Parks, Claude O., Iowa City
Parson, Victor G., Des Moines
Parsons, John C., Des Moines
Paschal, George A., Webster City
Pascoe, Paul L., Carroll
Patterson, John N., Burlington (L.M.)
Patterson, Roy A., Webster City
Paul, James R., Sioux City
Paul, John D., Anamosa
Paul, Richard E., Des Moines
Paul, William D., Iowa City
Paulsen, Donald A., Victor
Paulsen, Herbert B., Harris
Paulson, Jerome F., Mason City
Paulus, Edward W., Iowa City
Paulus, James W., Dubuque
Pearlman, Leo R., Des Moines
Pearson, George J., Burlington
Peart, John C., Davenport
Peasley, Harold R., Des Moines
Peck, Lowell J., Wellsburg
Peck, Raymond E., Davenport
Pedersen, Arthur M., Council Bluffs
Pedersen, Raymond E., Council Bluffs
Peggs, Harold J., Creston
Peisen, Conan J., Des Moines
Pelz, Werner P., Charles City
Penly, Don H., Cedar Falls
Pennington, Orville J., Dexter (L.M.)
Perel, Ada R., Iowa City
Perkins, Franklin C., Hedrick
Perkins, Rollin M., II, Davenport
Perley, Arthur E., Waterloo
Pester, George H., Council Bluffs
Petersen, Donal C., Burlington
Petersen, Millard T., Atlantic
Petersen, Robert E., Dubuque
Petersen, Vernon W., Clinton
Peterson, Elroy R., Ames
Peterson, Evan A., Burlington
Peterson, Frank R., Cedar Rapids
Peterson, John C., Hartley
Peterson, Ray W., Clear Lake
Peterson, Richard J., Panora
Pfaff, Robert A., Dubuque
Pfeiffer, Harry E., Riviera Beach, Fla.
Pfohl, Anthony C., Dubuque
Phelan, Mary P., Altoona
Phelps, C. Ray, Ottumwa
Phelps, Gardner D., Waterloo
Phelps, Richard E. H., New Sharon
Pheteplace, Willard S., Davenport
Phillips, Albin B., Clear Lake (L.M.)
Phillips, Allan B., Des Moines
Phillips, Clarence P., Muscatine
Phillips, Walter B., Montezuma
Piburn, Marvin F., South Rhodesia, Africa
Piekenbrock, Frank J., Dubuque
Piercy, Kenneth C., Ames
Pierson, Lawrence E., Sioux City
Pitcher, Arlo L., Belmond
Pitluck, Harry L., Laurens
Pittinger, Charles B., Iowa City
Plager, Vernon H., Waterloo
Plankers, Arthur C., Dubuque
Plass, Everett D., Saranac Lake, New York (L.M.)
Poepsel, Frank L., West Point
Ponseti, Ignacio V., Iowa City
Poore, Samuel D., Villisca
Porter, Charles E., Redfield (L.M.)
Porter, Philip M., Des Moines
Porter, Richard C., Des Moines
Porter, Robert J., Des Moines
Porter, S. Dale, Grinnell
Posner, Edward R., Jr., Des Moines
Posner, Edward R., Des Moines (L.M.)
Powell, Lester D., Des Moines
Powell, Robert A., Shenandoah
★Powers, George H., San Francisco, Calif.
Powers, Henry R., Emmetsburg
Powers, Ivan R., Waterloo
Powers, John L., Estherville
Preece, Wade O., Waterloo
Prendergast, Louis J., Iowa City
Prescott, Kenneth H., Storm Lake
Presnell, William H., Charlotte
Prewitt, Leland H., Ottumwa
Price, Alfred S., Des Moines (L.M.)
Priestley, Joseph B., Des Moines
Proctor, Rothwell D., Cedar Rapids
Prouty, James V., Cedar Rapids
Province, William, Jr., Dubuque
Ptacek, Joseph L., Webster City
Pugh, Philip F. H., Sioux City
Pumphrey, Loira C., Keokuk
Puntenney, Andrew W., Boone
Purdy, William O., Des Moines

Quinn, Francis P., Dubuque

Raasch, Richard F., Cedar Rapids
Radcliffe, Christian E., Iowa City
Radicia, Lucy M., Council Bluffs

Rahn, Gordon E., Mount Vernon
Rainy, Curtis W., Elma
Ralston, Furman, Knoxville
Rambo, David T., Ottumwa (L.M.)
Ramsdell, Stuart T., Clarinda
Randall, John H., Iowa City
Randall, Ross G., Waterloo
Randall, William L., Hampton
Rankin, Isom A., Iowa City
Rankin, John R., Keokuk
Rankin, William, Keokuk (L.M.)
Ransom, Harry E., Des Moines
Rater, David L., Ottumwa
Rathe, Herbert W., Waverly
Rausch, Gerald R., Sioux City
Ravreby, Mark D., Des Moines
Raw, Elmer J., Pierson (L.M.)
★Reading, Donald S., Des Moines
Readinger, Harry M., New London
Redfield, Earl L., Des Moines
Redmond, James J., Cedar Rapids
Redmond, Thomas M., Monticello (L.M.)
Reed, Andrew I., Estherville
Reed, Paul A., Iowa City (L.M.)
Reed, Robert J., Des Moines
Reed, Robert W., Iowa City
Reeder, James E., Sioux City
Reeder, James E., Jr., Sioux City
Reedholm, Edwin A., Grundy Center
Reimers, Robert S., Fort Madison
Rembolt, Raymond R., Iowa City
Rence, William G., Iowa City
Render, Norman D., Clarinda
Reuber, Roy N., Mason City
Reuling, Frank H., Waterloo
Reynolds, Albert C., Des Moines (L.M.)
Reynolds, Donald P., Fort Dodge
★Rhode, Marvin C., Philadelphia, Pa.
Rhodes, John M., Pocahontas
Rice, Floyd W., Des Moines (L.M.)
Richardson, Francis H., Iowa City
Richey, Granville L., Centerville
Richmond, Arthur C., Fort Madison
Richmond, Frank R., Fort Madison
Richmond, Frank R., Jr., Fort Madison
Richmond, Paul C., New Hampton
Richter, Harold J., Albia
Ridenour, Edward J., Dunkerton
Ridenour, Joseph E., Waterloo (L.M.)
Rider, Harmon E., Sioux City
Riegelman, Ralph H., Des Moines
Rieniets, John H., Cedar Rapids
Riggert, Leonard O., Clinton
Rimel, George W., Bedford
Rindskopf, Wallace, Des Moines
Ringena, Engelke J., Brooklyn
Rinker, George E., Oto (L.M.)
Ritter, Eugene F., Centerville
Rizzo, Frank M., Sibley
Robb, James B., Chariton (L.M.)
Robb, William J., Cedar Rapids
Roberts, C. Ronald, Dysart
Roberts, F. LeRoy, Corona, Calif. (L.M.)
Roberts, Francis M., Knoxville (L.M.)
Roberts, Justus B., Ottumwa
Robertson, Treadwell A., West Liberty
Robinson, Robert E., Waverly (L.M.)
Robinson, Van C., Des Moines
Rock, J. Gordon, Davenport
Rock, John E., Davenport
Rockwell, Maryelda, Clinton
Rodabaugh, Kenneth D., Tabor
Rodawig, Don F., Spirit Lake
Roddy, Harold J., Mason City
Rodemeyer, Frederick H., Sheffield
Rogers, Claude B., Earlville (L.M.)
Rohlf, Edward L., Jr., Waterloo
Rohwer, Roland T., Sioux City
Rolfs, Floyd O., Parkersburg
Rolfs, Fred A., Aplington
Romero, Jose M., Des Moines
*Romine, John H., Webster City (L.M.)
Rominger, Clark R., Waukon
Rominger, Clark W., Waukon
Rose, Alvin A., Story City
Rose, Joseph E., Grundy Center
Rosebrook, Lee E., Ames
Rosendorff, Charlotte, Davenport
Ross, Arthur J., Jr., Perry
Rost, Glenn S., Lake City
Rotkow, Maurice J., Des Moines
Roudybush, William B., Muscatine
Rowat, Harry L., Des Moines (L.M.)
Rowley, Robert D., Iowa City
Rowney, George W., Sioux City
Royal, Lester A., West Liberty
Royal, Malcolm A., Des Moines
Rudersdorf, Howard E., Sioux City
Ruliffson, Howard D., Storm Lake
Ruml, Wentzle, Cedar Rapids (L.M.)
Rusk, Ross P., Dubuque
Russell, Elwood P., Burlington
Russell, John, Santa Barbara, Calif. (L.M.)
Russell, Ralph E., Waterloo
Rust, Emery A., Webb (L.M.)
Ruth, Verl A., Des Moines
Ryan, Allen J., Harlan
Ryan, Charles M., Sioux City
Ryan, Cyril J., Clinton
Ryan, Martin J., Sioux City
Ryan, Robert A., Fairfield

Saar, Jesse L., Donnellson
Saar, Jesse L., Jr., Burlington
Saar, John W., Keokuk
Safley, Agnes I., Cedar Rapids (L.M.)
Safley, Max W., Forest City
Sahs, Adolph L., Iowa City
St. Onge, Joseph A., Sioux City
Samberg, Harry H., Des Moines
Sampson, Carl E., Creston
Sampson, Frank E., Creston (L.M.)
Sams, Joseph H., Clarion (L.M.)
Sanders, George E., Miami, Florida (L.M.)
Sanders, Matthew G., Fort Dodge
Sanders, Wilford M., Iowa City
Sanders, William E., Tucson, Arizona (L.M.)
Sands, Sidney L., Des Moines
Sarff, Floyd G., Logan
Sartor, Guido J., Mason City
Sartor, Pierre, Titonka (L.M.)
Satrang, Geraldine, Sioux City
Sattler, Dwight G., Kalona
Sauer, Harold E., Marshalltown
Saul, F. William, Mason City
Sautter, Robert A., Mount Vernon
Sawyer, Grace M., Woodward
Scales, E. Thomas, Des Moines
Scanlan, George C., Iowa City
Scanlon, George H., Iowa City
Schacht, Norman A., Fort Dodge
Schaefer, Paul H., Iowa City (L.M.)
Schaeferle, Lawrence G., Gladbrook
Schaeferle, Martin J., Eagle Grove
Schafer, Leander H., DeWitt
Schanche, Arthur N., Ames
Scharle, Theodore, Dubuque
Scheffel, Melvin L., Malvern
Scheibe, John R., Bloomfield
Scheldrup, Eugene W., Iowa City
Schiff, Joseph, Spokane, Washington
Schill, Austin E., Des Moines
Schissel, Donald, Des Moines
Schlaser, Verne L., Des Moines
Schlichtemeier, Ellis O., Spencer
Schnug, George E., Dows
Scholl, Charles R., Vinton
Schoonover, Richard, Bloomfield
Schrier, Harold L., Fort Madison
Schrock, Christian E., Iowa City
Schroeder, Adrian J., Marshalltown
Schroeder, Frank N., Ryan
Schroeder, Leslie V., Walcott
Schropp, Rutledge C., Des Moines
Schrup, Joseph H., Dubuque (L.M.)
Schueller, Charles J., Dubuque
Schultz, Ivan T., Humboldt
Schultz, Marvin H., Iowa City
Schultz, Nelle E. T., Humboldt
Schupp, Joseph G., Jr., Des Moines
Schutter, John M., Algona
Schwartz, John W., Sioux City
Sciortino, Arthur L., Council Bluffs
Sciscent, Verdi I., Waterloo
Scott, Phillip A., Spirit Lake
Scott, Sophie Hinze, Des Moines (L.M.)
Scoville, Victor T., Sioux City
Seaman, Charles L., Cherokee
★Sear, John, Alden
★Sears, Richard H., Washington, D. C.
Sedlacek, Leo B., Cedar Rapids
Seebohm, Paul M., Iowa City
Seely, Harmon D., Cherokee
Seibert, Cecil W., Waterloo
Seidler, William A., Jr., Jamaica
*Seiler, Raymond A., Blairstown
Sellards, Joseph W., Clarinda (L.M.)
Sells, Benjamin B., Independence (L.M.)
Selman, Ralph J., Ottumwa
Selo, Rudolph A., Council Bluffs
Senska, Frank R., Iowa City
Senty, Elmer G., Davenport
Severson, George J., Slater
★Severson, Wayne L., Slater
Shafer, Arthur W., Davenport
Shane, Robert S., Pilot Mound
Shank, Raymond A., Cedar Rapids
Shannon, Edwin R., Waterloo (L.M.)
Shapiro, Seymour W., Des Moines
Sharpe, Donald C., Dubuque
Shaw, David F., Britt
Shaw, Robert E. Waverly
Shea, Thomas E., Storm Lake
Sheeler, Ivan H., Des Moines
Sheets, Raymond F., Iowa City
Shelton, Charles D., Bloomfield (L.M.)
Shepherd, Loyd K., Des Moines
Sherman, Richard C., Los Angeles, Calif. (L.M.)
Shiffler, H. Kirby, Des Moines
Shinkle, William C., Des Moines
Shohet, Isaac H., Bode
Shonka, Thomas E., Malvern
Shope, Charles D., Greenfield
Shorey, Joseph R., Davenport
Shulkin, Sam H., Sioux City
Shulman, Herbert, Waterloo
Shurts, John J., Eldora
Sibley, Edward H., Sioux City
Siems, Lawrence L., San Diego, Calif.
Siems, Margaret V., San Diego, Calif.
Simmons, Ralph R., Des Moines
Singer, John R., Newton
Singer, Siegmund F., Ottumwa
Sinkey, Donald B., Osage
Sinn, Irvin J., Williamsburg
Sinning, Augustus, Iowa City (L.M.)
Sinning, John E., Marshalltown
★Sinton, David W., Denver, Colorado
Skaggs, Joseph T., New York, N. Y.
Skallerup, Glenn M., Red Oak
Skelley, Paul B., Jr., Dubuque
Skinner, Homer L., Des Moines
Skopec, Francis M., Mason City
Skultety, F. Miles, Iowa City
Skultety, James A., Des Moines
★Slate, William G., Iowa City
Sloan, Fred R., Waterloo
Sloan, Frederic J., Cedar Rapids
Smazal, Stanley F., Davenport
Smead, Howard H., Des Moines
Smead, Leslie L., Newton
Smiley, George W., Ottumwa
Smiley, Ralph E., Mason City
Smith, Andrew D., Estherville
Smith, Anthony P., Hampton
Smith, Arthur F., Manning
Smith, Cecil R., Wyoming
★Smith, Charles B., San Antonio, Tex.
Smith, Clyde J., Ringsted
Smith, Elmer M., Eagle Grove
Smith, Eugene, Waterloo
Smith, Herman J., Des Moines
*Smith, Harold F., Iowa City
Smith, Howard W., Woodward
Smith, J. Ned, Iowa City
Smith, John E., Clarence (L.M.)
Smith, Lawrence D., Des Moines
Smith, Richard W., Clarion
Smith, Robert A., Albia
Smith, Robert T., Granger
Smith, Rodger B., Mason City
Smith, S. Rodmond, Red Oak
Smith, Sidney A., Oskaloosa
Smrha, James A., Cedar Rapids
Smythe, Arnold M., Des Moines
Snyder, Dean C., San Diego, California
Snyder, Raleigh R., Des Moines
Sohm, Herbert A., Des Moines
Sokol, Charles R., State Center
Sola, Olav M., Des Moines
Sones, Clement A., Des Moines
Sorensen, Elmer M., Red Oak
Sorenson, Aral C., Davenport
Sorenson, Kermit R., Sabula
Southwick, William W., Marshalltown
Spain, Robert T., Conrad (L.M.)
Sparks, Francis R., Waverly (L.M.)
Spear, William, Oakdale
Spearing, Joseph H., Harlan
Speidel, Glenn P., Hartford, Conn.
Spellman, George G., Sioux City
Spellman, Martin T., Cedar Rapids
Spencer, Philip L., Essex
Sperow, Wendell B., Nevada
Sperry, Frederick S., Clarinda
Spevak, Jack J., Des Moines
Spielhagen, Guenther F., Iowa City
Spilman, Harold A., Ottumwa
Springer, Floyd A., Des Moines
Sproul, William M., Des Moines
Sprowell, Robert R., Ames
Stalford, John H., Sac City (L.M.)
Stam, Nicholas C., Mason City
Stamler, Frederic W., Iowa City
Standefer, Joe M., Des Moines
Standeven, James W., Oakland
Stansbury, John E., Cedar Rapids
Stark, Callistus H., Cedar Rapids
Stark, Frederick M., Sioux City
Starr, Charles F., Mason City (L.M.)
Starry, Allen C., Sioux City

Statton, Roy F., La Porte City
Stauch, Martin O., Moorhead
Stauch, Omar A., Sioux City
Staudt, Alfred J., Waterloo
Steenrod, Emerson J., Iowa Falls
Steffens, Lincoln F., Dubuque
Steffey, Fred L., Keokuk
Stegmaier, Otto C., Davenport
Stegman, Jacob J., Marshalltown
Steinberger, George C., Des Moines
Steindler, Arthur, Iowa City (L.M.)
Stephen, Paul, Cedar Rapids
Stephen Raymond J., Cedar Rapids
Stepp, James K., Manchester
Sternagel, Fred, West Des Moines
Sternberg, Walter A., Corona Del Mar, California (L.M.)
Sternhill, Irving, Van Nuys, Calif.
Sternhill, Isaac, Council Bluffs
Stevens, Clark W., Dubuque
Stevens, John D., Omaha, Nebraska
Stevenson, Eber F., Waterloo (L.M.)
Steves, Richard J., Des Moines
Stewart, John H., Ottumwa
Stewart, John K., Clinton
Stewart, William L., Mediapolis
Stickler, Robert B., Des Moines
Stimac, Emil M., Davenport
Stinson, Alice C., Estherville (L.M.)
Stitt, Paul L., Fort Dodge
Stoakes, Charles S., Lime Springs (L.M.)
Stober, Raymond W., Charles City
Stojkovic, Joseph P., Iowa City
Stolley, J. George, Moville
Storck, Robert D., Dubuque
Straub, Joseph J., Dubuque
Straumanis, Janis, Riverside
Strawn, John T., Des Moines (L.M.)
*Stribley, Harry A., Dubuque
Stroy, Herbert E., Osceola
Stuart, Percy E., Nashua (L.M.)
Stueland, Alvin J. R., Mason City
Stumme, Ernest H., Denver
Suchomel, Thomas F., Cedar Rapids
Sullivan, Daniel J., Sutherland
Sullivan, John J., Clinton
Sullivan, John V., Carroll
Sulzbach, John F., Burlington
Summers, Thomas B., Iowa City
Sun, Kuei shu, Ames
Sunderbruch, John H., Davenport
Sutton, Gerald H., Jr., Davenport
Svendsen, Reinert N., Decorah
Swanger, Carroll E., Oskaloosa
Swann, Raymond O., Iowa City
★Swanson, Eric M., Omaha, Nebraska
Swanson, Gerald W., Lamoni
Swanson, Leslie W., Mason City
Sweeney, Lloyd J., Sanborn
Swift, Frederick J., Maquoketa (L.M.)
Swift, Frederick J., Jr., Maquoketa
Sybenga, Jacob J., Pella
Synhorst, John B., Des Moines
Sywassink, George A., Muscatine

Taber, Rodman E., Iowa City
Tait, John H., Des Moines
Tamisiea, Francis X., Missouri Valley
Taraba, Ralph W., Burlington
Taylor, Charles B., Claremont, California (L.M.)
Taylor, Charles I., Pomeroy (L.M.)
Taylor, Donald E., Stuart
Taylor, James H., Clinton
Taylor, Lawrence A., Ottumwa
Taylor, Maude, Ottumwa
Taylor, Robert S., Davenport
Taylor, Wendel W., Sheffield
Teigland, Joel D., Des Moines
Tempel, Paul F., Charles City
Ten Eyck, Edward A., Iowa City
Teufel, John C., Davenport (L.M.)
Thaler, David, Cedar Rapids
Tharp, Herbert M., Monroe
Thatcher, Wilbur C., Fort Dodge
Theilen, Ernest O., Iowa City
Thein, Garfield M., Oelwein
Theisen, Roy I., Dubuque
Thielen, Edward W., Waterloo
Thielen, John B., Fonda
Thoman, William S., Sioux City
Thomas, Clifford W., Mason City
Thomas, Clyde E., Keystone
Thomas, Colin G., Monticello
Thomas, James H., Sibley
Thomas, James R., Evansdale
Thomas, William H., McGregor (L.M.)
Thompson, E. Dean, Jefferson
Thompson, Howard E., Dubuque (L.M.)
Thompson, James R., Waterloo
★Thompson, James W., Camp Breckenridge, Kentucky
Thompson, Kenneth L., Oakland
Thompson, Virginia D., Des Moines
Thomsen, John G., Des Moines
Thomsen, Thomas F., Red Oak (L.M.)
Thorburn, Oral L., Ames
Thornburg, William V., Guthrie Center (L.M.)
Thornton, F. Eberle, Des Moines
Thornton, John W., Lansing
Thornton, Thomas F., Waterloo
Thornton, Thomas F., Jr., Waterloo
Thorsness, Edwin T., Dubuque
Thorson, John A., Dubuque
Throckmorton, J. Fred, Des Moines
Throckmorton, Jeannette D., Des Moines (L.M.)
*Throckmorton, Robert F., Des Moines (L.M.)
Throckmorton, Scott L., Chariton
Throckmorton, Tom B., Des Moines
Throckmorton, Tom D., Des Moines
Tice, Claude B., Mason City (L.M.)
Tice, George I., Mason City
Tice, W. Arnold, Waterloo
Tidrick, Robert T., Iowa City
Tiedeman, John P., Sioux City
Tierney, Edmund J., Sioux City
Tierney, James M., Carroll
Tilton, John J., Bellevue
Tinley, Mathew A., Council Bluffs (L.M.)
Todd, Donald W., Guthrie Center
Todd, Robert L., Burlington
Tolliver, Hillard A., Charles City
Top, Franklin H., Iowa City
Toubes, Abraham A., Des Moines
TouVelle, Alwyn R., Bettendorf
Towle, Robert A., Davenport
Tracy, John S., Sioux City
Traffon, Harold F., Council Bluffs
Traister, John E., Eddyville
Trefz, Donald L., Nashua
Treichler, Howard P., Waterloo
Trey, Bernard L., Marshalltown
Treynor, Jack V., Council Bluffs
Trier, Paul J., Des Moines
★Trosman, Harry, Oceanside, California
Trotzig, Joseph P., Akron
Troxel, John F., Cedar Rapids
Troxell, Millard A., Cedar Rapids
Trueblood, Clare A., Indianola
Trumpe, William D., Cedar Rapids
Trunnell, Thomas L., Waterloo
Tucker, Francis C., Cedar Rapids
Turner, George E., West Des Moines
Turner, Howard V., Des Moines
Turner, Rosalie C., Nashua
★Turner, Roy M., Armstrong
Turner, William R., Fort Dodge
Tyler, Donald E., Fort Dodge
Tyrrell, John E., Manchester

Uchiyama, John K., Des Moines
Undem, Dale W., Spirit Lake
Underriner, Robert E., Holstein
Updegraff, Charles L., Boone
Updegraff, Robert R., Des Moines
Updegraff, Thomas R., Waterloo
Utterback, Robert A., Iowa City

Valiquette, Frank G., Sioux City
Van Bemmel, Piet F., Ames
Van Camp, Thomas H., Breda
Vander Meulen, Herman C., Pella
Vander Stoep, Harry L., Le Mars
Vander Veer, Frank L., Janesville (L.M.)
Van Epps, Clarence E., Iowa City (L.M.)
Van Epps, Eugene F., Iowa City
Vangsness, Ingmar U., Sioux City
Van Metre, Paul W., Rockwell City
Van Natta, Carlton W., West Des Moines
Van Patten, E. Martin, Fort Dodge
Van Tiger, William H., Eldora
Van Werden, Benjamin D., Keokuk
Van Zante, Peter, Pella
Vaubel, Ellis K., Estherville
Veldhouse, Richard H., Cedar Rapids
Veltman, John F., Winterset
Vercio, Raymond A., Burlington
Vespa, Raymond, Des Moines
Victorine, Edward M., Cedar Rapids
Vincent, Jack F., Fort Dodge
Vincent, John W., Sioux City
Viner, Thomas R., Leon
Vineyard, Thomas L., Ottumwa
Voigt, Ernest J., Burlington
Voigt, Franz O. W., Oskaloosa
von Lackum, J. Kenneth, Cedar Rapids
Vorhes, Carl E., Sheldon
Vorisek, Elmer A., Des Moines
Vorpahl, Rudolph A., Cedar Rapids
Vosika, Edward J., Shelby
Voss, Otto R., Davenport

Waggoner, Charles V., Clinton
Wagner, Donald J., Sioux City
Wagner, Eugene C., Plainfield
Wahrer, Frederick L., Marshalltown
Wainwright, Max T., Sioux City
Walker, Charles C., Des Moines
Walker, Glenn L., Burlington
Walker, Harry L., Cedar Rapids (L.M.)
Walker, Herbert P., Clarion (L.M.)
Walker, John R., Waterloo
Walker, Thomas G., Riceville
Walker, Thomas S., Riceville (L.M.)
Wall, David, Ames
★Wall, John M., Montgomery, Alabama
Walliker, Wilbur M., Clinton (L.M.)
Walsh, William E., Hawkeye
Walston, Edwin B., Des Moines (L.M.)
Walston, James H., Sioux City
Walton, Seth G., Hampton
Walz, Donald V., Iowa City
Wanamaker, A. Roy, Hamburg
Ward, Donovan F., Dubuque
Ward, Loraine W., Oelwein
Ward, Thomas L., Arnolds Park
Ware, Stephen C., Iowa City
Ware, Thomas A., Des Moines
Warner, Emory D., Iowa City
Warner, Paul L., Des Moines
Wasser, David A., Iowa City
Waterbury, Charles A., Jr., Waterloo
Watson, Charles F., Fairfield
Watson, Elbert J., Diagonal (L.M.)
Watters, George H., Des Moines
Watts, A. Fred, Creston
Watts, Campbell F., Cedar Rapids
Watts, Clyde F., Marengo
Weaver, David F., Davenport
Weaver, Kenneth H., Union
Weaver, Ralph L., Cumberland
Webb, Daniel R., Oakdale
Weber, Frank N., Walnut
Weber, Leslie E., Wapello
Weber, William W., Pomeroy
Weems, Nev E., Paullina
Weih, Elmer P., Clinton
Weikel, Vernon E., Sioux City
Weinberg, Harry B., Davenport
Weingart, Julius S., Des Moines
Weir, Edward C., Council Bluffs (L.M.)
Weis, Howard A., Davenport
Weland, Regis E., Cedar Rapids
Wells, Rodney C., Marshalltown
Wentworth, Laydon S., Marble Rock
Wentzien, Albert J., Tama
Werner, Harold T., Fort Madison
West, Alroy G., Council Bluffs
West, Norman D., Avoca
West, Walter E., Centerville (L.M.)
*Westly, Gabriel S., Manly (L.M.)
Westly, G. Travis, Mason City
Westly, J. Stephen, Mason City
Weston, B. Raymond, Mason City
Weston, Robert A., Des Moines (L.M.)
Wetrich, Max F., Grand Junction
Weybrauch, Robert A., Waterloo
Weyer, Joseph J., Fort Dodge
Wheeler, Richard A., Des Moines
Whitaker, Ben T., Boone
White, George H., Des Moines
White, Paul A., Davenport
Whitehouse, William N., Ottumwa
Whitley, Ralph L., Osage (L.M.)
Whitmer, Lysle H., Muscatine
Whitmire, James E., Sumner
Whitmire, William L., Sumner (L.M.)
Wichern, Homer E., Des Moines
Wicklund, Maurice M., Waterloo
Wicks, Ralph L., Boone
Wickstrum, Arthur P., Iowa City
Widmer, James G., Wayland
Widmer, Reuben B., Winfield
Wiedemeier, Joseph L., Sioux City
Wilcox, Delano, Malcolm (L.M.)
Wilcox, Dwain E., Atlantic
Wilcox, Edgar B., Oskaloosa
Wilcox, Keith E., Muscatine
Wilcox, Robert A., Iowa City
Wildberger, William C., Perry
Wilhelmi, Raymond W., Sioux City
Wilke, Frank A., Perry
Wilkinson, Levi J., Laurel
Willett, Wilton J., Manchester
Williams, Frank S., Villisca (L.M.)
Williams, Lawrence B., Maquoketa
Williams, Nathan B., Belle Plaine

Wilson, Charles R., Manson
Wilson, F. Dale, Davenport
Wilson, Frederic L., Sioux City
Wilson, Frederic W., Sioux City
★Wilson, Robert G., Clovis, N. M.
Winder, Clifford D., Waterloo
Winninger, Louis T., Waterloo
★Winter, F. Donald, Seattle, Wash.
Wirtz, Dwight C., Des Moines
Wise, Arthur C., Iowa City
Wise, James H., Cherokee
Wolcott, Ruth F., Spirit Lake
Wolf, Henry H., Elgin
Wolf, William J., West Union
Wolfe, Otis D., Marshalltown
Wolfe, Russell M., Marshalltown
Wolfe, Wilson C., Ottumwa
Wolfson, Harold, Kingsley
Wolpert, Paul L., Onawa
Wolters, Donald E., Estherville
Wolverton, Benjamin F., Cedar Rapids
Wood, John R., Wadena
Woodard, Floyd O., Des Moines
Woodbridge, James W., Madera, California (L.M.)
Woodburn, Chester C., Jr., Des Moines
Woodhouse, George R., Vinton
Woodhouse, Keith W., Cedar Rapids
Woods, Andrew H., Wellsley Hills, Mass. (L.M.)
Woodward, Lee R., Mason City
Wooters, Richard C., Des Moines
★Workman, Robert D., New London, Conn.
Wormhoudt, Herbert L., Ottumwa
Worrell, James T., Keosauqua
Wray, Clarence M., Iowa Falls (L.M.)
Wray, Robert M., Cedar Rapids
Wright, David W., Decorah
Wright, Thomas D., Newton
Wright, Walter N., Rose Hill (L.M.)
Wubbena, Arthur C., Rock Rapids
Wunschel, Richard C., Davenport
Wurtzer, Ezra L., Clear Lake
Wyatt, George M., Iowa City
Wykoff, Sarah U., Des Moines

Yamamoto, Masa, Iowa City
Yancey, C. Corbin, Sioux City
Yetter, William L., Iowa City
Yocom, Albert L., Chariton
York, Dallas L., Villisca
Young, Ernest R., Dubuque (L.M.)
Young, George G., Des Moines
Young, Henry C., Bloomfield (L.M.)
Young, Howard O., Marion
Young, James J., Clinton
Young, Richard A., Clarion
Yugend, Sidney F., Indianola

Zabloudil, Warren C., Preston
Zager, Lewis L., Waterloo
Zibilich, George J., Lone Tree
Ziffren, Sidney E., Iowa City
Zimmerer, Edmund G., Des Moines
Zimmerman, George R., Iowa City
Zoeckler, Samuel J., Des Moines
*Zoller, Sherwood B., Fredericksburg
Zuercher, Arlo R., Cedar Rapids
Zukerman, Cecil M., Davenport

★ Military Service
* Deceased
(L.M.) Life Member

FIFTY YEAR CLUB MEMBERS

June 15, 1955

Adams, Ernest M.....Central City
Agnew, Fred F.....Independence
Baldwin, Leon A.....Riverton
Barbour, Howard W.....Mason City
Barton, Edwin G.....Ottumwa
Beardsley, David E. ..... Cedar Rapids
Beatty, Alexander S.....Creston
Beatty, Edward D.....Mallard
Bell, Edward P.....Pleasantville
Bierring, Walter L.....Des Moines
Bigelow, Charles T.....LaGrange, Ill.
Binford, William S.....Davenport
Birney, Cleanthus E.....Estherville
Boice, Clyde A.....Washington
Bowers, Arthur S.....Orient
Boyer, Howard C.....Council Bluffs
Bullock, William E.....Lake Park
Cantwell, John D.....Davenport
Carlile, Amos W.....Manning
Carson, Andros.....Des Moines
Chase, William B., Sr. .....Des Moines
Chittum, John H. .....Wapello
Clasen, Henry W.....Cedar Falls
Cole, Elmer J.....Woodbine
Cooper, Jay C..... Villisca
Crain, Lewis F.....Deep River
Crain, Mattie M.....Deep River
Cretzmeyer, Charles H.....Algona
Crew, Arthur E.....Marion
Dean, Frank W.....Council Bluffs
Dean, William F. .....Osceola
Decker, Jay C.....Sioux City
Dennison, John C.....Bellevue
Downing, Leroy M.....Cedar Rapids
Dulin, Tarana J. G.....Iowa City
Dunn, James.....Davenport
Ellyson, Charles W.....Waterloo
Fields, Robert B.....La Porte City
Foulk, Frank E.....Backus, Minn.
Fullerton, Oscar L.....Redding
Gaard, Rasmus R.....Radcliffe
Gardner, John R.....Lisbon
Gearhart, George W.....Springville
Gillmor, Benjamin F.....Red Oak
Givens, H. Frank.....West Bend
Gray, Henry A.....Keokuk
Gray, John F.....Melcher
Griffin, Frank L. .....Baldwin
Gutch, Thomas E.....Albia
Harkness, Gordon F.....Davenport
Harrington, Burton.....Cedar Rapids
Harris, Grove W.....Marshalltown
Heady, Conda C. C.....Bloomfield
Heald, Clarence L.....Sigourney
Heathman, Frank E.....Pocahontas
Heles, John B.....Dubuque
Henry, Clyde A.....Farson
Hoffman, Paul M.....Tipton
Hollis, Edward L.....Marengo
Houser, Cass T.....Cedar Rapids
Housholder, Harold A.....Winthrop
Hull, Henry C.....Washington
Jackson, James M.....Jefferson
Jaenicke, Kurt.....Clinton
James, Peter E.....Audubon
Janse, Phillip V.....Algona
Jastram, Alfred H.....Remsen
Jenkins, George A.....Albia
Johnson, Amos F.....Manilla
Johnson, George M.....Oberlin, Ohio
Jones, Harry J.....Cedar Rapids
Joynt, Martin J.....Le Mars
Kahler, Hugo V.....Reinbeck
Kauffman, William A.....Marshalltown
Keech, Roy F.....Cedar Rapids
Kennedy, Elizabeth S.....Oelwein
Kern, Lester C.....Waverly
King, Oran W.....Des Moines
Kisor, Frank H.....Mechanicsville
Knox, James M.....Cedar Rapids
Kuhl, Augustus B.....Davenport
Kulp, Raymond R.....Davenport
Kyle, William S.....Washington
Lincoln, Simon E.....Des Moines
Losh, Clifford W.....Des Moines
Luke, Edward.....Coin
Lundvick, Arthur W.....Gowrie
McBurney, George F.....Belmond

McDowall, Gilbert T.....Gladbrook
McDowell, William O.....Grundy Center
McLaughlin, Charles W.....Washington
Marble, Pearl L.....Liscomb
Maresh, George W.....Denver, Colo.
Mason, Stella M.....Mason City
Merkel, Arthur E.....Des Moines
Merritt, Arthur M.....Des Moines
Meyers, Frank W.....Dubuque
Mills, Frank W.....Ottumwa
Minassian, Harootune A.....Des Moines
Morrison, John W.....Alta
Morrison, Wesley J.....Cedar Rapids
Morse, Charles H.....Eagle Grove
Mott, William H.....Farmington
Murchison, Kenneth.....Sidney
Murray, Frederick G.....Cedar Rapids
Nash, Edwin A.....Ottumwa
Neal, Emma J.....Cedar Rapids
Nelson, Frederick L.....Ottumwa
Niblock, George F.....Denver, Colo.
Nicoll, David T.....Mitchellville
Noble, Earl H.....Clemons
O'Donoghue, James H.....Storm Lake
Oggel, Herman D.....Maurice
Olsen, Martin I.....Des Moines
Pace, Arthur A.....Toledo
Pagelsen, Otto H.....Des Moines
Patterson, John N.....Burlington
Peck, Raymond E.....Davenport
Pfeiffer, Harry E.....Riviera Beach, Fla.
Phillips, Albin B.....Clear Lake
Posner, Edward R.....Des Moines
Price, Alfred S.....Des Moines
Quire, Frank E.....Lynnville
Rambo, David T.....Ottumwa
Rankin, William.....Keokuk
Raw, Elmer J.....Pierson
Redmond, Thomas M.....Monticello
Rinker, George E.....Oto
Robb, James B.....Chariton
Robinson, Robert E.....Waverly
Rogers, Claude B.....Earlville
Ruml, Wentzle.....Cedar Rapids
Rust, Emery A.....Webb
Safely, Agnes I.....Cedar Rapids
Sams, Joseph H.....Clarion
Sanders, William E.....Tucson, Ariz.
Scott, Sophie H.....Des Moines
Sellards, Joseph W. .....Clarinda
Sells, Benjamin B.....Independence
Shelton, Charles D.....Bloomfield
Sinning, Augustus.....Iowa City
Smith, John E.....Clarence
Spain, Robert T.....Conrad
Steindler, Arthur.....Iowa City
Sternberg, Walter A.....Corona Del Mar, Calif.
Stinson, Alice C.....Estherville
Stuart, Percy E.....Nashua
Teufel, John C.....Davenport
Thomas, William H.....McGregor
Thompson, James R.....Waterloo
Tinley, Mathew A.....Council Bluffs
Tinsman, Eugene S.....Orient
Van Epps, Clarence E.....Iowa City
Walker, Harry L.....Cedar Rapids
Waliker, Wilbur M.....Clinton
Walsh, Thomas N.....Hawkeye
Walston, Edwin B.....Des Moines
Watson, Elbert J.....Diagonal
Weir, Edward C.....Council Bluffs
Westenberger, Joseph C.....St. Ansgar
Weston, Robert A.....Des Moines
Whitley, Ralph L.....Osage
Whitmire, William L.....Sumner
Woodbridge, James W.....Madera, Calif.
Wray, Clarence M.....Iowa Falls
Wright, Walter N.....Rose Hill
Young, Ernest R.....Dubuque
Young, Henry C.....Bloomfield

MEMBERSHIP ROSTER of the WOMAN'S AUXILIARY To the IOWA STATE MEDICAL SOCIETY 1955

Members in Good Standing as of June 15th, 1955

Abbott, Mrs. W. D., Des Moines
Acher, Mrs. A. E., Fort Dodge
Acker, Mrs. R. D., Waterloo
Acker, Mrs. W. H., Waterloo
Addison, Mrs. C. P., Waterloo
Aid, Mrs. F. H., Burlington
Albert, Mrs. Henry, Des Moines
Alberts, Mrs. M. E., Des Moines
Alden, Mrs. Oscar, Red Oak
Allen, Mrs. M. B., Fort Dodge
Allison, Mrs. M. P., Northwood
Alt, Mrs. L. P., Dubuque
Amick, Mrs. Perry, Des Moines
Ambery, Mrs. Sebastian, Keokuk
Amesbury, Mrs. H. A., Clinton
Anderson, Mrs. D. C., Stanhope
Anderson, Mrs. H. M., Strawberry Point
Anderson, Mrs. H. N., Des Moines
Anderson, Mrs. J. D., Des Moines
Anderson, Mrs. S. N., Onawa
Anderson, Mrs. W. D., Des Moines
Angell, Mrs. C. A., Des Moines
Anthony, Mrs. W. E., Ottumwa
Arkin, Mrs. Archie A., Des Moines
Armstrong, Mrs. F. C., Cascade
Armstrong, Mrs. M. A., Newell
Ash, Mrs. Wallace, DeWitt
Ashline, Mrs. G. H., Keokuk
Augspurger, Mrs. B. B., Des Moines
Austin, Mrs. A. T., Ottumwa
Ayers, Mrs. L. J., Sioux City

Bacon, Mrs. J. E., Dubuque
Bailey, Mrs. R. O., Waterloo
Bairnson, Mrs. G. A., Cedar Falls
Baker, Mrs. C. J., Fort Dodge
Baker, Mrs. J. N., Cedar Falls
Baker, Mrs. W. E., Des Moines
Bakody, Mrs. J. T., Des Moines
Barrent, Mrs. M. E., Clinton
Barnett, Mrs. S. W., Cedar Falls
Bartels, Mrs. E. R., Dubuque
Barton, Mrs. E. G., Ottumwa
Barton, Mrs. R. L., Dubuque
Bastron, Mrs. H. C., Red Oak
Basinger, Mrs. B. L., Goldfield
Bates, Mrs. M. T., Des Moines
Bay, Mrs. F. N., Albia
Bean, Mrs. E. O., Council Bluffs
Beatty, Mrs. H. G., Creston
Beaumont, Mrs. F. H., Council Bluffs
Beckman, Mrs. P. W., Perry
Beddoes, Mrs. M. G., Waterloo
Beebe, Mrs. K. P., Mount Pleasant
Beeh, Mrs. E. F., Fort Dodge
Bell, Mrs. R. S., Burlington
Bender, Mrs. H. A., Waterloo
Bendixen, Mrs. F. C., Le Mars
Bening, Mrs. J. F., Clarinda
Beran, Mrs. J. J., Waterloo

Bergen, Mrs. C. T., Northwood
Berkstresser, Mrs. C. F., Sioux City
Bernard, Mrs. R. D., Ames
Bettler, Mrs. P. L., Sioux City
Beye, Mrs. C. L., Sioux City
Bickley, Mrs. D. W., Waterloo
Bickley, Mrs. J. W., Waterloo
Biersborn, Mrs. B. B., State Center
Bierman, Mrs. M. H., Council Bluffs
Billingsley, Mrs. J. W., Newton
Bird, Mrs. R. G., Clarion
Birge, Mrs. R. F., Des Moines
Bisgard, Mrs. C. V., Harlan
Black, Mrs. J. R., Jefferson
Blackstone, Mrs. M. A., Sioux City
Blaha, Mrs. V. B., Marshalltown
Blaha, Mrs. G. A., Whitten
Blair, Mrs. D. W., Des Moines
Bliss, Mrs. W. R., Ames
Blome, Mrs. A. L., Ottumwa
Blume, Mrs. G. C., Ottumwa
Blume, Mrs. D. B., Sioux City
Boden, Mrs. W. C., Sioux City
Boe, Mrs. Henry, Sioux City
Boice, Mrs. C. A., Washington
Boller, Mrs. G. C., Waterloo
Bond, Mrs. T. A., Des Moines
Bone, Mrs. H. C., Des Moines
Bossingham, Mrs. E. N., Clarinda
Boston, Mrs. B. C., Waterloo
Boulden, Mrs. R. W., Lenox
Bourne, Mrs. M. G., Algona
Bovenmyer, Mrs. D. O., Ottumwa
Bowers, Mrs. C. V., Sioux City
Bradford, Mrs. G. T., Dubuque
Bradshaw, Mrs. D. E., Fort Dodge
Brecher, Mrs. P. W., Storm Lake
Brereton, Mrs. H. L., Emmetsburg
Bridge, Mrs. B. C., Jefferson
Brindley, Mrs. R. W., Des Moines
Brink, Mrs. J. R., Ayrshire
Brinker, Mrs. M. H., Jefferson
Brody, Mrs. Sidney, Ottumwa
Brown, Mrs. A. W., West Des Moines
Brown, Mrs. C. A., Sioux City
Brown, Mrs. I. E., Hartley
Brown, Mrs. W. B., Mount Pleasant
Brummitt, Mrs. C. F., Centerville
Bruner, Mrs. J. M., Des Moines
Brunk, Mrs. A. W., Prescott
Brush, Mrs. C. H., Shenandoah
Buckles, Mrs. R. D., Waterloo
Bullock, Mrs. A. L., Cushing
Bullock, Mrs. G. D., Inwood
Bunting, Mrs. R. A., Shenandoah
Burcham, Mrs. T. A., Des Moines
Burgeson, Mrs. F. M., Des Moines
Burke, Mrs. E. T., Des Moines
Burleson, Mrs. M. W., Fort Dodge
Burns, Mrs. R. I., Des Moines
Burr, Mrs. C. L., Des Moines
Burroughs, Mrs. H. H., Sioux City
Bushmer, Mrs. Alexander, Orange City
Bushnell, Mrs. J. W., Sioux City
Butts, Mrs. Harold, Waterloo
Buxton, Mrs. O. C., Jr., Webster City

Callaghan, Mrs. A. J., Jr., Sioux City
Canady, Mrs. G. F., Jefferson
Carey, Mrs. E. T., Clinton
Carpenter, Mrs. F. E., Newton
Carpenter, Mrs. R. C., Marshalltown
Carroll, Mrs. T. J., Sibley
Carryer, Mrs. C. H., Des Moines
Carson, Mrs. R. W., Winterset
Cary, Mrs. Walter, Dubuque
Castel, Mrs. J. W., Fairfield
Castles, Mrs. W. A., Dallas Center
Catlin, Mrs. K. A., Clarinda
Caughlan, Mrs. G. V., Council Bluffs
Chapler, Mrs. K. M., Dexter
Chase, Mrs. S. B., Fort Dodge
Chase, Mrs. W. B., Des Moines
Chase, Mrs. W. B., Jr., Des Moines
Chase, Mrs. W. E., Rippey
Chestnut, Mrs. P. F., Winterset
Chittum, Mrs. J. H., Wapello
Christensen, Mrs. J. R., Eagle Grove
Christiansen, Mrs. C. C., Grand Mound
Clappison, Mrs. G. B., Iowa City
Clapsaddle, Mrs. D. W., Clear Lake
Clark, Mrs. Howard, Stuart
Clark, Mrs. J. P., Estherville
Clark, Mrs. R. E., Manchester
Cochran, Mrs. A. M., Perry
Cody, Mrs. W. E., Sioux City
Coffin, Mrs. L. A., Farmington
Coffman, Mrs. E. W., Dubuque
Cogley, Mrs. J. P., Council Bluffs
Cohen, Mrs. S. A., Council Bluffs
Colbert, Mrs. L. D., Royal
Coleman, Mrs. F. C., Des Moines
Collingnon, Mrs. U. J., Council Bluffs
Conlon, Mrs. J. B., Council Bluffs
Connell, Mrs. John, Des Moines
Connelly, Mrs. E. J., Dubuque
Conzett, Mrs. D. C., Dubuque
Cook, Mrs. K. G., Fairfield
Cook, Mrs. S. H., Rock Rapids
Cooper, Mrs. C. N., Waterloo
Cooper, Mrs. D. C., Fort Dodge
Cooper, Miss Zada, Villisca
Coppoc, Mrs. L. E., Ottumwa
Coriden, Mrs. T. L., Sioux City
Corn, Mrs. H. H., Des Moines
Cornish, Mrs. J. A., Storm Lake
Corton, Mrs. R. V., Waterloo
Coughlan, Mrs. C. H., Fort Dodge
Coughlan, Mrs. D. W., Des Moines
Coulson, Mrs. F. H., Burlington
Cox, Mrs. R. L., Estherville
Coyne, Mrs. K. M., Burlington
Crandall, Mrs. J. S., Marshalltown
Crawford, Mrs. R. H., Burlington
Crawford, Mrs. W. M., Burlington
Cressler, Mrs. F. E., Churdan
Cretzmeyer, Mrs. F. X., Emmetsburg
Cronk, Mrs. C. H., Bloomfield
Crow, Mrs. G. B., Burlington
Crowley, Mrs. D. F., Des Moines
Crowley, Mrs. D. F., Jr., Des Moines
Croxdale, Mrs. E. L., Villisca
Crumpton, Mrs. R. C., Webster City
Culbertson, Mrs. R. A., Des Moines
Cunningham, Mrs. M. B., Norwalk

Dahl, Mrs. H. W., Des Moines
Dalager, Mrs. R. D., Ottumwa
Darrow, Mrs. C. A., Dubuque
Davey, Mrs. W. P., Sioux City
Davidson, Mrs. T. E., Mason City
Dawson, Mrs. E. B., Fort Dodge
Dean, Mrs. A. M., Council Bluffs
Decker, Mrs. H. G., Des Moines
Decker, Mrs. J. C., Sioux City
Deranleau, Mrs. R. F., Perry
Dewees, Mrs. F. L., Keokuk
DeYarman, Mrs. K. T., Morning Sun
Diamond, Mrs. B. V., Waterloo
Dick, Mrs. Frederick, Cedar Falls
Dickens, Mrs. J. H., Des Moines
Diddy, Mrs. K. W., Perry
Dilley, Mrs. H. H., Des Moines
Dimsdale, Mrs. L. J., Sioux City
Ditto, Mrs. B. L., Burlington
Ditto, Mrs. W. B., Burlington
Dohnalek, Mrs. D. W., Waukon
Donahue, Mrs. J. C., Centerville
Donohue, Mrs. E. C., Sioux City
Donlin, Mrs. R. E., Harlan
Donovan, Mrs. M. J., Perry
Dorner, Mrs. R. A., Des Moines
Dorsey, Mrs. T. J., Jr., Fort Dodge
Down, Mrs. H. I., Sioux City
Downing, Mrs. A. H., Des Moines
Downing, Mrs. J. A., Des Moines
Downing, Mrs. W. L., Le Mars
Downs, Mrs. V. S., Ottumwa
Drew, Mrs. E. J., Des Moines
Drier, Mrs. W. C., Waterloo
Driver, Mrs. R. W., Waterloo
Drown, Mrs. R. E., Fort Dodge
Dvorak, Mrs. J. E., Sioux City
Duddles, Mrs. R. T., Scranton
Duewall, Mrs. R. H., Des Moines
Duling, Mrs. R. J., Sioux City
Dunham, Mrs. H. H., Cedar Falls
Dunlevy, Mrs. J. H., Fairfield
Dunn, Mrs. D. E., Estherville
Dunn, Mrs. R. C., Des Moines
Dusdieker, Mrs. S. W., West Des Moines
Dwyer, Mrs. B. B., Clinton
Dwyer, Mrs. R. E. Clinton
Dyson, Mrs. J. E., Des Moines
Dyson, Mrs. R. E., Des Moines

Eastburn, Mrs. H. B., Burlington
Eaton, Mrs. R. C., Clarion
Ebinger, Mrs. E. W., Ottumwa
Echternacht, Mrs. A. P., Fort Dodge
Edelman, Mrs. D. L., Des Moines
Edington, Mrs. F. D., Spencer
Edwards, Mrs. C. V., Council Bluffs
Edwards, Mrs. R. R., Centerville
Egbert, Mrs. D. S., Fort Dodge
Egermayer, Mrs. G. W., Elliott
Eggleston, Mrs. A. A., Burlington
Eisenach, Mrs. J. R., Shenandoah
Eller, Mrs. L. W., Kanawha
Eller, Mrs. W. C., Waterloo
Elliott, Mrs. O. A., Des Moines
Ellis, Mrs. H. G., Des Moines
Ellison, Mrs. G. M., Clinton
Ellyson, Mrs. C. D., Waterloo
Ellyson, Mrs. C. W., Waterloo
Ely, Mrs. F. A., Des Moines
Ely, Mrs. L. O., Des Moines
Emanuel, Mrs. D. G., Ottumwa
Emmons, Mrs. M. B., Clinton
Eneboe, Mrs. E. M., Hawarden
Englemann, Mrs. A. T., Sioux City
Englund, Mrs. P. M., Fort Dodge
Ennis, Mrs. H. H., Manchester
Entringer, Mrs. A. J., Dubuque
Entz, Mrs. F. H., Waterloo
Erickson, Mrs. E. D., Sioux City
Evans, Mrs. John, Winterset

Faber, Mrs. L. A., Dubuque
Fail, Mrs. C. D., Adel
Felter, Mrs. A. G., Van Meter
Fenton, Mrs. C. D., Bloomfield
Ferguson, Mrs. J. W., Newton
Fickel, Mrs. J. D., Red Oak
Field, Mrs. G. A., Des Moines
Fiesler, Mrs. W. R., Fort Dodge
Finch, Mrs. G. H., Des Moines
Fieselmann, Mrs. G. F., Spencer
Fisch, Mrs. R. J., Le Mars
Fisher, Mrs. W. A., Creston
Fitzgerald, Mrs. J. D., Sloan
Floersch, Mrs. E. B., Council Bluffs
Flynn, Mrs. C. H., Clarinda
Fordyce, Mrs. Frank, Johnston
Foss, Mrs. J. F., Burlington
Foster, Mrs. W. H., Clinton
Fox, Mrs. R. A., Charles City
Fox, Mrs. Stephan, Ottumwa
Frank, Mrs. L. J., Sioux City
Frankle, Mrs. A. H., Des Moines
Fraser, Mrs. J. B., Des moines
Franklin, Mrs. G. W., Jefferson
Frederickson, Mrs. A. R., Lansing
French, Mrs. V. D., Cedar Falls
Frenkel, Mrs. H. S., Clarinda
Friday, Mrs. W. C., Burlington
Frink, Mrs. L. E., Reinbeck
Frink, Mrs. L. F., Spencer
Fuerste, Mrs. Frederick, Jr., Dubuque
Furumoto, Mrs. Kiyoshi, Keosauqua

Gannon, Mrs. James, Laurens
Ganzhorn, Mrs. H. L., Mapleton
Gardner, Mrs. H. O., Waterloo
Garland, Mrs. J. C., Marshalltown
Gaukel, Mrs. L. A., Onawa
Gault, Mrs. J. B., Creston
Gee, Mrs. K. J., Shenandoah
Gelperin, Mrs. Abraham, Des Moines
George, Mrs. E. M., Des Moines
George, Mrs. L. A., Remsen
Gerard, Mrs. R. S., Waterloo
Gerken, Mrs. J. F., Waterloo
Gessford, Mrs. H. H., George
Getty, Mrs. E. B., Primghar
Gibbon, Mrs. W. H., Sioux City
Gibbs, Mrs. G. M., Burlington
Gibson, Mrs. D. N., Des Moines
Gibson, Mrs. P. E., Des Moines
Giegerich, Mrs. W. F., Atlantic
Giles, Mrs. W. C., Council Bluffs
Gilfillan, Mrs. C. D. N., Bloomfield
Gilfillan, Mrs. E. E., Memphis, Missouri
Gilfillan, Mrs. E. O., Bloomfield
Gilfillan, Mrs. H. J., Jr., Bloomfield
Gingles, Mrs. E. E., Onawa
Gittins, Mrs. T. R., Sioux City
Gittler, Mrs. Ludwig, Fairfield
Glesne, Mrs. O. N., Fort Dodge
Glick, Mrs. Julius, Clinton
Goldberg, Mrs. Louie, Des Moines
Goodman, Mrs. L. O., Marshalltown
Gordon, Mrs. A. M., Des Moines
Gorrell, Mrs. R. L., Clarion
Gottsch, Mrs. E. J., Shenandoah
Gould, Mrs. G. R., Grundy Center
Graber, Mrs. H. E., Fairfield
Graham, Mrs. J. W., Sioux City
Graves, Mrs. J. P., Dubuque
Gray, Mrs. C. W., Ottumwa
Greenhill, Mrs. Solomon, Des Moines
Greteman, Mrs. T. J., Dubuque
Griffin, Mrs. J. M., Des Moines
Griffin, Mrs. R. E., Sheldon
Griffith, Mrs. W. H., Clinton
Griffith, Mrs. W. O., Council Bluffs
Grossman, Mrs. M. D., Sioux City
Grossman, Mrs. E. B., Orange City
Gugle, Mrs. L. J., Ottumwa
Gunn, Mrs. R. E., Boone
Gurau, Mrs. H. H., Des Moines
Gustafson, Mrs. J. E., Des Moines
Gutenkauf, Mrs. C. H., Des Moines

Haggar, Mrs. D. K., Hawarden
Haines, Mrs. D. J., Des Moines
Hall, Mrs. F. F., Webster City
Hamilton, Mrs. B. C., Jefferson
Hansell, Mrs. W. W., Des Moines
Hansen, Mrs. F. A., Red Oak
Hansen, Mrs. R. R., Marshalltown
Hanske, Mrs. E. A., Burlington
Hanson, Mrs. C. A., Waterloo
Hanssmann, Mrs. I. J., Council Bluffs
Harnagel, Mrs. E. J., Des Moines
Harrington, Mrs. L. E., Danbury
Harrington, Mrs. R. J., Sioux City

Harris, Mrs. D. D., Marshalltown
Harris, Mrs. R. R., Dubuque
Hartley, Mrs. B. D., Mount Pleasant
Hartman, Mrs. H. J., Waterloo
Hastings, Mrs. R. A., Ottumwa
Haufe, Mrs. W. D., Bloomfield
Hawkins, Mrs. C. P., Clarion
Hayden, Mrs. M. D., Marcus
Hayek, Mrs. J. M., Des Moines
Hayne, Mrs. W. W., Des Moines
Hearst, Mrs. George, Cedar Falls
Heeren, Mrs. R. D., Des Moines
Heffernan, Mrs. C. E., Sioux City
Hegg, Mrs. L. R., Rock Valley
Heileman, Mrs. R. D., Sioux City
Heimann, Mrs. V. R., Sioux City
Heise, Mrs. C. A., Jr., Jewell
Heise, Mrs. H. R., Marshalltown
Helt, Mrs. V. G., Moville
Henderson, Mrs. J. L., Cedar Falls
Hendrickson, Mrs. A. H., Sioux City
Hennessy, Mrs. J. D., Council Bluffs
Henry, Mrs. C. A., Farson
Henstorf, Mrs. H. R., Shenandoah
Herman, Mrs. J. C., Boone
Herrick, Mrs. W. E., Ottumwa
Hersey, Mrs. N. L., Independence
Heusinkveld, Mrs. H. J., Clinton
Hickenlooper, Mrs. C. B., Winterset
Hickman, Mrs. C. S., Centerville
Hicks, Mrs. W. K., Sioux City
Hill, Mrs. D. E., Clinton
Hill, Mrs. L. F., Des Moines
Hines, Mrs. R. E., Des Moines
Hirsch, Mrs. H. N., Sioux City
Hirst, Mrs. D. V., Council Bluffs
Hoeven, Mrs. E. B., Ottumwa
Hoffman, Mrs. A. A., Waterloo
Holloway, Mrs. C. E., Des Moines
Hombach, Mrs. W. P., Council Bluffs
Honke, Mrs. E. M., Sioux City
Hooper, Mrs. L. E., Indianola
Hornaday, Mrs. W. R., Des Moines
Horst, Mrs. A. W., Sioux City
Hosford, Mrs. H. F., Burlington
Hostetter, Mrs. J. I., Des Moines
Howar, Mrs. B. F., Webster City
Howard, Mrs. D. E., Sioux City
Howard, Mrs. L. G., Council Bluffs
Howell, Mrs. D. A., Dubuque
Howell, Mrs. E. B., Ottumwa
Hoyt, Mrs. J. L., Creston
Hruska, Mrs. G. J., Belmond
Hughes, Mrs. P. K., Des Moines
Hughes, Mrs. R. O., Ottumwa
Hulse, Mrs. R. A., Burlington
Huntley, Mrs. C. C., Avoca
Huston, Mrs. D. F., Burlington
Huston, Mrs. M. D., Cedar Falls
Hyde, Mrs. J. R., Emmetsburg

Ingham, Mrs. P. G., Mapleton
Irving, Mrs. Noble, Jr., Des Moines

Jackson, Mrs. J. M., Jefferson
Jackson, Mrs. J. S., Mount Pleasant
Jacobs, Mrs. C. A., Sioux City
Jacobs, Mrs. E. L., Conrad
James, Mrs. A. D., Des Moines
Jaskunas, Mrs. S. R., Bloomfield
Jeffries, Mrs. J. H., Waterloo
Jeffries, Mrs. M. E., Marshalltown
Jeffries, Mrs. R. R., Waukon
Jenkins, Mrs. G. D., Burlington
Jenks, Mrs. A. L., Des Moines
Jensen, Mrs. K. V., Clarinda
Jessup, Mrs. P. M., Muscatine
Jongewaard, Mrs. A. J., Jefferson
Jongewaard, Mrs. R. E., Scranton
Johnson, Mrs. A. Q., Sioux City
Johnson, Mrs. G. R., Ottumwa
Johnson, Mrs. F. N., Des Moines
Johnson, Mrs. R. M., Fort Des Moines
Johnston, Mrs. C. H., Des Moines
Johnston, Mrs. G. B., Estherville
Johnston, Mrs. W. A., Dubuque
Jones, Mrs. C. C., Spencer
Jones, Mrs. C. C., Des Moines
Jones, Mrs. H. W., Sioux City
Jordan, Mrs. M. S., Clinton
Jowett, Mrs. J. R., Clinton
Joyce, Mrs. G. T., Mason City
Joynt, Mrs. A. J., Waterloo
Joynt, Mrs. M. F., Marcus
Joynt, Mrs. M. J., Le Mars
Juel, Mrs. E. M., Atlantic

Kahler, Mrs. H. V., Reinbeck
Kane, Mrs. T. E., Boone
Kaplan, Mrs. D. D., Sioux City
Kassmeyer, Mrs. J. C., Dubuque
Kast, Mrs. D. H., Des Moines
Katherman, Mrs. C. A., Sioux City
Katzmann, Mrs. F. S., Des Moines
Keane, Mrs. K. M., Sioux City
Keen, Mrs. B. E., Des Moines
Kelberg, Mrs. M. R., Sioux City
Kelley, Mrs. E. J., Des Moines
Kelly, Mrs. D. H., Des Moines
Kelly, Mrs. J. F., Sioux City
Kelly, Mrs. W. J., Dubuque
Keohen, Mrs. G. F., Dubuque
Kerr, Mrs. K. M., Paton
Kersten, Mrs. E. M., Fort Dodge
Kersten, Mrs. J. R., Fort Dodge
Kersten, Mrs. P. M., Fort Dodge
Kershner, Mrs. F. O., Clinton
Kestel, Mrs. J. L., Waterloo
Keyser, Mrs. E. L., Marshalltown
Kienzle, Mrs. Jane, Wellsburg
Kiesau, Mrs. M. F., Postville
Kiesling, Mrs. H. F., Lehigh
Kilgore, Mrs. B. F., Des Moines
King, Mrs. D. H., Spencer
King, Mrs. R. C., Clinton
Kingsbury, Mrs. K. R., Ottumwa
Kirch, Mrs. W. A., Des Moines
Kirkegaard, Mrs. C. S., Estherville
Kirkham, Mrs. L. J., Mason City
Kitson, Mrs. W. W., Atlantic
Kleinburg, Mrs. H. E., Des Moines
Klocksiem, Mrs. H. L., Des Moines
Klok, Mrs. G. J., Council Bluffs
Kluever, Mrs. H. C., Fort Dodge
Knight, Mrs. E. C., Marshalltown
Knipfer, Mrs. R. L., Jesup
Knott, Mrs. P. D., Sioux City
Knowles, Mrs. F. L., Fort Dodge
Knutsen, Mrs. Arne, Sioux City
Koelling, Mrs. L. H., Newton
Krause, Mrs. R. E., Ottumwa
Kretteck, Mrs. J. E., Council Bluffs
Krigsten, Mrs. J. M., Sioux City
Kuehn, Mrs. W. O., Clarinda
Kuhl, Mrs. R. H., Creston
Kuhn, Mrs. M. A., Waterloo

Lachner, Mrs. B. J., Des Moines
Lagen, Mrs. M. S., Dubuque
La Master, Mrs. Hugh, Pringhar
Lambrecht, Mrs. P. B., Des Moines
Langdon, Mrs. F. B., Des Moines
Larimer, Mrs. R. C., Jr., Sioux City
Larimer, Mrs. R. N., Sioux City
Larsen, Mrs. E. A., Centerville
Larsen, Mrs. F. S., Fort Dodge
Larsen, Mrs. H. T., Fort Dodge
Larsen, Mrs. L. V., Harlan
Larson, Mrs. M. O., Hawarden
La Rue, Mrs. J. L., Anita
Latchem, Mrs. C. W., Des Moines
Laube, Mrs. P. J., Dubuque
Lavender, Mrs. J. G., George
Leander, Mrs. R. B., Council Bluffs
Lee, Mrs. R. W., Burlington
Lee, Mrs. W. R., Burlington
Leffert, Mrs. F. B., Centerville
Leighton, Mrs. L. L., Fort Dodge
Leinbach, Mrs. S. P., Belmond
Leiter, Mrs. H. C., Sioux City
Lenaghan, Mrs. R. T., Clinton
Leonard, Mrs. T. K., Madrid
Liken, Mrs. J. A., Creston
Limburg, Mrs. J. I., Jefferson
Limburg, Mrs. J. I., Jr., Jefferson
Lincoln, Mrs. S. E., Des Moines
Lindell, Mrs. S. E., Le Mars
Linder, Mrs. E. E., Ogden
Lindholm, Mrs. C. V., Armstrong
Liska, Mrs. E. J., Ute
Lister, Mrs. E. E., Dallas Center
Lister, Mrs. K. E., Ottumwa
Loeck, Mrs. J. F., Independence
Lohmann, Mrs. C. J., Burlington
Lohr, Mrs. P. E., Churdan
Long, Mrs. L. L., Atlantic
Longworth, Mrs. W. H., Boone
Loomis, Mrs. F. G., Waterloo
Losh, Mrs. C. W., Des Moines
Losh, Mrs. C. W., Jr., Des Moines
Lovejoy, Mrs. E. P., Des Moines
Lowry, Mrs. C. F., Council Bluffs
Luehrsmann, Mrs. B. C., Dyersville
Luke, Mrs. Edward, Coin
Lutton, Mrs. J. D., Sioux City

McAllister, Mrs. W. G., Manly
McBride, Mrs. R. H., Sioux City
McCarthy, Mrs. F. D., Sioux City
McClean, Mrs. E. D., Des Moines
McClellan, Mrs. J. W., Onawa
McClurg, Mrs. F. H., Fairfield
McCool, Mrs. R. F., Clarion
McCoy, Mrs. J. T., Cedar Falls
McCuistion, Mrs. H. M., Sioux City
McDowell, Mrs. Faye, Grundy Center
McGahey, Mrs. W. B., Webster City
McGarvey, Mrs. N. J., Des Moines
McGeehon, Mrs. R. C., Indianola
McGilvra, Mrs. A. L., Sioux Center
McGuire, Mrs. R. A., Fairfield
McIntosh, Mrs. P. D., Ottumwa
McKay, Mrs. R. V., Dubuque
McKean, Mrs. F. F., Allison
McKitterick, Mrs. J. C., Burlington
McMillan, Mrs. G. J., Fort Madison
McMurray, Mrs. H. N., Burlington
McNamara, Mrs. R. J., Dubuque
McNamee, Mrs. J. H., Des Moines
McTaggart, Mrs. W. B., Fort Dodge
Magee, Mrs. E. E., Waterloo
Mahoney, Mrs. J. D., Council Bluffs
Mailliard, Mrs. R. E., Storm Lake
Maixner, Mrs. W. D., Ottumwa
Maloy, Mrs. W. H., Shenandoah
Manderscheid, Mrs. R. A., Boone
Manthey, Mrs. C. E., Waterloo
Maplethorpe, Mrs. C. W., Toledo
Maplethorpe, Mrs. C. W., Jr., Toledo
Marble, Mrs. E. J., Marshalltown
Marble, Mrs. P. L., Liscomb
Marble, Mrs. W. P., Marshalltown
Maris, Mrs. Cornelius, Sanborn
Maris, Mrs. William, Sioux Center
Mark, Mrs. M. S., Des Moines
Marker, Mrs. J. I., Davenport
Marquis, Mrs. F. M., Waterloo
Marquis, Mrs. G. S., Des Moines
Marsh, Mrs. F. E., Council Bluffs
Marsh, Mrs. F. E., Jr., Council Bluffs
Martin, Mrs. L. R., Council Bluffs
Martini, Mrs. H. F., Council Bluffs
Mason, Mrs. R. P., Des Moines
Matheson, Mrs. J. H., Des Moines
Mathiasen, Mrs. E. B., Council Bluffs
Mathiasen, Mrs. H. W., Council Bluffs
Mathiasen, Mrs. J. W., Council Bluffs
Matthews, Mrs. R. J., Clarinda
Mauritz, Mrs. E. L., Des Moines
Maxwell, Mrs. C. T., Sioux City
Mazur, Mrs. T. T., Burlington
Megorden, Mrs. W. H., Mount Pleasant
Mehler, Mrs. Frank, New London
Meredith, Mrs. L. K., Des Moines
Merillat, Mrs. H. C., Des Moines
Merkel, Mrs. A. E., Des Moines
Merkel, Mrs. B. M., Des Moines
Merritt, Mrs. F. B., Dubuque
Meyer, Mrs. A. K., Clinton
Meyers, Mrs. P. T., Bloomfield
Meyers, Mrs. R. P., Ottumwa
Michaelson, Mrs. Don, Boone
Mikelson, Mrs. C. J., Waterloo
Miller, Mrs. R. C., Waterloo
Miller, Mrs. R. L., Waterloo
Minassian, Mrs. T. A., Des Moines
Mirick, Mrs. D. F., Clinton
Mitchell, Mrs. C. H., Cincinnati
Moberly, Mrs. J. W., Dubuque
Moe, Mrs. R. H., Griswold
Moerke, Mrs. R. F., Burlington
Moermond, Mrs. J. O., Hull
Moes, Mrs. M. J., Dubuque
Mol, Mrs. H. L., Grundy Center
Moore, Mrs. C. C., Emmetsburg
Moore, Mrs. E. E., Fort Dodge
Moore, Mrs. Fred, Des Moines
Moore, Mrs. H. H., Ottumwa
Moore, Mrs. R. M., Des Moines
Moorehead, Mrs. H. B., Underwood
Morgan, Mrs. F. W., Ottumwa
Morgan, Mrs. J. N., Fairfield
Morgan, Mrs. R. L., Sioux City
Moriarity, Mrs. D. L., Council Bluffs
Moriarty, Mrs. J. F., Atlantic
Morrison, Mrs. R. E., Waterloo
Morrissey, Mrs. W. J., Des Moines
Mountain, Mrs. G. E., Des Moines
Mugan, Mrs. R. C., Sioux City
Mulsow, Mrs. F. W., Cedar Rapids
Munger, Mrs. E. E., Spencer
Murphy, Mrs. C. B., Alton
Murphy, Mrs. G. C., Waterloo
Murphy, Mrs. J. H., Des Moines
Murray, Mrs. J. H., Burlington
Myers, Mrs. J. J., Postville

Nakishima, Mrs. V. K., Dubuque
Needles, Mrs. R. M., Atlantic
Neff, Mrs. Herbert, La Plata, Puerto Rico
Nelken, Mrs. Leonard, Clinton
Nelson, Mrs. A. L., Des Moines
Nelson, Mrs. F. L., Ottumwa
Nelson, Mrs. F. L., Jr., Ottumwa
Nelson, Mrs. L. C., Jefferson
Nelson, Mrs. P. O., Emmetsburg
Nelson, Mrs. R. J., Clinton
Newland, Mrs. D. O., Des Moines
Nicholson, Mrs. C. G., Des Moines
Nicoll, Mrs. C. A., Panora
Nielsen, Mrs. R. F., Cedar Falls
Nielson, Mrs. A. L., Council Bluffs
Noble, Mrs. R. P., Alta
Norment, Mrs. J. E., Clinton
Norris, Mrs. L. D., Newton

Noun, Mrs. L. J., Des Moines
Noun, Mrs. M. H., Des Moines

Ober, Mrs. F. G., Burlington
O'Donnell, Mrs. J. E., Clinton
O'Donoghue, Mrs. A. F., Sioux City
Oelrich, Mrs. C. D., Sioux Center
O'Keefe, Mrs. P. T., Waterloo
O'Leary, Mrs. F. B., Sibley
Olin, Mrs. E. E., Dubuque
Olsen, Mrs. M. I., Des Moines
Olsen, Mrs. R. E., Milton
Olson, Mrs. R. L., Northwood
Olson, Mrs. S. O., Des Moines
Orelup, Mrs. D. N., Albia
Osborn, Mrs. C. R., Dexter
Osincup, Mrs. P. W., Sioux City
Osten, Mrs. B. H., Northwood
O'Toole, Mrs. L. C., Le Mars
O'Toole, Mrs. R. L., Waterloo
Otto, Mrs. P. C., Fort Dodge
Owca, Mrs. A. S., Centerville

Pahlas, Mrs. H. M., Dubuque
Paige, Mrs. R. T., La Porte City
Painter, Mrs. J. C., Dubuque
Palcheff, Mrs. C. L., Fairfield
Paragas, Mrs. M. R., Creston
Parsons, Mrs. J. C., Des Moines
Paschal, Mrs. G. A., Webster City
Patterson, Mrs. R. A., Webster City
Paul, Mrs. J. R., Sioux City
Paulsen, Mrs. H. B., Harris
Paulus, Mrs. J. W., Dubuque
Payne, Mrs. H. C., Des Moines
Pearlman, Mrs. L. R., Des Moines
Pearson, Mrs. G. J., Burlington
Peck, Mrs. L. J., Grundy Center
Pedersen, Mrs. A. M., Council Bluffs
Pedersen, Mrs. P. D., Council Bluffs
Peggs, Mrs. H. J., Creston
Peisen, Mrs. C. J., Des Moines
Penly, Mrs. D. H., Cedar Falls
Perley, Mrs. A. E., Waterloo
Pester, Mrs. G. H., Council Bluffs
Petersen, Mrs. D. C., Burlington
Petersen, Mrs. E. C., Atlantic
Petersen, Mrs. M. T., Atlantic
Petersen, Mrs. R. J., Panora
Petersen, Mrs. V. W., Clinton
Peterson, Mrs. J. C., Jr., Hartley
Pfaff, Mrs. R. A., Dubuque
Pfohl, Mrs. A. C., Dubuque
Phelps, Mrs. C. R., Ottumwa
Phelps, Mrs. G. D., Waterloo
Phillips, Mrs. A. B., Clear Lake
Phillips, Mrs. A. B., Des Moines
Phillips, Mrs. C. P., Muscatine
Pierson, Mrs. L. E., Sioux City
Pitcher, Mrs. A. L., Belmond
Pitluck, Mrs. H. L., Laurens
Plager, Mrs. V. H., Waterloo
Poepsel, Mrs. F. L., West Point
Poore, Mrs. S. D., Villisca
Porter, Mrs. C. E., Redfield
Porter, Mrs. R. C., Des Moines
Porter, Mrs. R. J., Des Moines
Posner, Mrs. E. R., Des Moines
Powell, Mrs. L. D., Des Moines
Powell, Mrs. R. A., Shenandoah
Powers, Mrs. G. H., Shenandoah
Powers, Mrs. J. L., Estherville
Preece, Mrs. W. O., Waterloo
Prescott, Mrs. R. H., Storm Lake
Prewitt, Mrs. L. H., Ottumwa
Priestley, Mrs. J. B., Des Moines
Province, Mrs. William, Jr., Dubuque
Ptacek, Mrs. J. L., Webster City
Pugh, Mrs. P. H., Sioux City
Pumphrey, Mrs. L. C., Keokuk
Puntenney, Mrs. A. W., Boone
Putnam, Mrs. C. L., Des Moines

Quinn, Mrs. F. P., Dubuque

Ralston, Mrs. F. P., Knoxville
Rambo, Mrs. D. T., Ottumwa
Rambo, Mrs. E. F., Webster City
Ramsdell, Mrs. S. T., Clarinda
Randall, Mrs. R. G., Waterloo
Rankin, Mrs. J. R., Keokuk
Rater, Mrs. D. L., Ottumwa
Rausch, Mrs. G. R., Sioux City
Readinger, Mrs. H. M., New London
Redfield, Mrs. E. L., Des Moines
Reed, Mrs. A. I., Estherville
Reeder, Mrs. J. E., Sioux City
Reeder, Mrs. J. E., Jr., Sioux City
Reedholm, Mrs. Evelyn, Grundy Center
Render, Mrs. N. D., Clarinda
Reuling, Mrs. F. H., Waterloo
Richey, Mrs. G. L., Centerville
Rider, Mrs. H. E., Sioux City
Riegelman, Mrs. R. H., Des Moines
Riggert, Mrs. L. O., Clinton
Rindskopf, Mrs. Wallace, Des Moines
Ritter, Mrs. E. F., Centerville
Rizzo, Mrs. Frank, Sibley
Robert, Mrs. R. L., Waterloo
Roberts, Mrs. J. B., Ottumwa
Rodawig, Mrs. D. F., Spirit Lake
Rogers, Mrs. C. B., Earlville
Rohwer, Mrs. R. T., Sioux City
Rominger, Mrs. C. R., Waukon
Rose, Mrs. J. E., Grundy Center
Ross, Mrs. A. J., Perry
Rotkow, Mrs. M. J., Des Moines
Rowney, Mrs. G. W., Sioux City
Royal, Mrs. M. A., Des Moines
Rudersdorf, Mrs. H. E., Sioux City
Rusk, Mrs. R. P., Dubuque
Russell, Mrs. E. P., Burlington
Rust, Mrs. E. A., Webb
Ryan, Mrs. A. J., Harlan
Ryan, Mrs. C. J., Clinton
Ryan, Mrs. C. M., Sioux City
Ryan, Mrs. M. J., Sioux City
Ryan, Mrs. R. A., Fairfield

Saar, Mrs. J. L., Jr., Burlington
Samberg, Mrs. H. H., Des Moines
Sampson, Mrs. C. E., Creston
Sanders, Mrs. M. G., Fort Dodge
Sands, Mrs. S. L., Des Moines
Sattler, Mrs. D. G., Kalona
Sauer, Mrs. H. E., Marshalltown
Sayre, Mrs. I. K., St. Charles
Schacht, Mrs. N. A., Fort Dodge
Schaeferle, Mrs. M. J., Eagle Grove
Schafer, Mrs. L. N., DeWitt
Scharle, Mrs. Theodore, Dubuque
Scheibe, Mrs. J. R., Bloomfield
Schill, Mrs. A. E., Des Moines
Schissel, Mrs. D. J., Des Moines
Schlaser, Mrs. V. L., Des Moines
Schlichtemeier, Mrs. E. O., Spencer
Schoonover, Mrs. Richard, Bloomfield
Schrock, Mrs. C. E., Sioux City
Schroeder, Mrs. A. J., Marshalltown
Schroeder, Mrs. F. N., Ryan
Schropp, Mrs. R. C., Des Moines
Schueller, Mrs. C. J., Dubuque
Schwartz, Mrs. J. W., Sioux City
Sciscent, Mrs. V. I., Waterloo
Scott, Mrs. P. A., Spirit Lake
Scoville, Mrs. V. T., Sioux City
Seabloom, Mrs. J. L., Red Oak
Seibert, Mrs. C. W., Waterloo
Seidler, Mrs. W. A., Jamaica
Seidler, Mrs. W. A., Jr., Jamaica
Selman, Mrs. R. J., Ottumwa
Selo, Mrs. R. A., Council Bluffs
Sharpe, Mrs. D. C., Dubuque
Shaw, Mrs. D. F., Britt
Shaw, Mrs. Gladys, Indianola
Shea, Mrs. T. E., Storm Lake
Sheeler, Mrs. I. H., Des Moines
Shepherd, Mrs. L. K., Des Moines
Shiffler, Mrs. H. K., Des Moines
Shulkin, Mrs. S. H., Sioux City
Shulman, Mrs. Herbert, Waterloo
Sibley, Mrs. E. H., Sioux City
Singer, Mrs. S. F., Ottumwa
Skallerup, Mrs. G. M., Red Oak
Skelley, Mrs. P. B., Dubuque
Skultety, Mrs. J. A., Des Moines
Sloan, Mrs. F. R., Waterloo
Smead, Mrs. H. H., Des Moines
Smead, Mrs. L. L., Newton
Smith, Mrs. A. D., Estherville
Smith, Mrs. C. J., Ringsted
Smith, Mrs. Eugene, Waterloo
Smith, Mrs. E. M., Eagle Grove
Smith, Mrs. H. J., Des Moines
Smith, Mrs. H. W., Woodward
Smith, Mrs. J. E., Clarence
Smith, Mrs. L. D., Des Moines
Smith, Mrs. R. W., Clarion
Smith, Mrs. R. T., Granger
Smith, Mrs. S. R., Red Oak
Smythe, Mrs. A. M., Des Moines
Snyder, Mrs. R. R., Des Moines
Sokol, Mrs. C. R., State Center
Sones, Mrs. C. A., Des Moines
Sorenson, Mrs. E. M., Red Oak
Southwick, Mrs. W. W., Marshalltown
Spearing, Mrs. J. H., Harlan
Spellman, Mrs. G. G., Sioux City
Spencer, Mrs. P. L., Essex
Sperry, Mrs. F. S., Clarinda
Spilman, Mrs. H. A., Ottumwa
Springer, Mrs. F. A., Des Moines
Standefer, Mrs. J. M., Des Moines
Stark, Mrs. C. H., Cedar Rapids
Stark, Mrs. F. M., Sioux City
Starry, Mrs. A. C., Sioux City
Stauch, Mrs. M. O., Moorehead
Stauch, Mrs. O. A., Sioux City
Staudt, Mrs. A. J., Waterloo
Steelsmith, Mrs. F. R., Des Moines
Steffens, Mrs. L. F., Dubuque
Stepp, Mrs. J. K., Manchester
Sternagel, Mrs. Fred, West Des Moines
Sternhill, Mrs. Isaac, Council Bluffs
Stevens, Mrs. C. W., Dubuque
Steves, Mrs. R. J., Des Moines
Stewart, Mrs. J. H., Ottumwa
Stickler, Mrs. R. B., Des Moines
Stitt, Mrs. P. L., Fort Dodge
Stolley, Mrs. J. G., Moville
Storck, Mrs. R. D., Dubuque
Straub, Mrs. J. J., Dubuque
Stroy, Mrs. H. E., Osceola
Sulzbach, Mrs. J. F., Burlington
Sutton, Mrs. G. H., Jr., Boone
Sweeney, Mrs. Lloyd J., Sanborn
Synhorst, Mrs. J. B., Des Moines
Sype, Mrs. W. W., Centerville
Swallum, Mrs. T. W., Spencer

Tait, Mrs. J. H., Des Moines
Talley, Mrs. L. F., Marshalltown
Taylor, Mrs. J. H., Clinton
Taylor, Mrs. L. A., Ottumwa
Thatcher, Mrs. W. C., Fort Dodge
Thielen, Mrs. E. W., Waterloo
Theisen, Mrs. R. I., Dubuque
Thoman, Mrs. W. S., Sioux City
Thomas, Mrs. J. H., Sibley
Thompson, Mrs. E. D., Jefferson
Thompson, Mrs. H. E., Dubuque
Thomsen, Mrs. J. G., Des Moines
Thomsen, Mrs. T. F., Red Oak
Thornburg, Mrs. W. V., Guthrie Center
Thornton, Mrs. J. W., Lansing
Thornton, Mrs. F. E., Des Moines
Thornton, Mrs. T. F., Waterloo
Thornton, Mrs. T. F., Jr., Waterloo
Thorson, Mrs. J. A., Dubuque
Thorsness, Mrs. E. T., Dubuque
Throckmorton, Mrs. Fred, Des Moines
Throckmorton, Mrs. J. F., Des Moines
Throckmorton, Mrs. T. B., Des Moines
Throckmorton, Mrs. T. D., Des Moines
Thurman, Mrs. E. J., Waterloo
Tice, Mrs. W. A., Waterloo
Tiedman, Mrs. J. P., Sioux City
Tierney, Mrs. E. J., Sioux City
Todd, Mrs. R. L., Burlington
Toubes, Mrs. A. A., Des Moines
Tracy, Mrs. J. S., Sioux City
Trafton, Mrs. H. F., Council Bluffs
Treichler, Mrs. H. P., Cedar Falls
Trotzig, Mrs. J. P., Akron
Trueblood, Mrs. C. A., Indianola
Trunnell, Mrs. T. L., Waterloo
Turner, Mrs. H. V., Des Moines
Turner, Mrs. R. M., Armstrong
Turner, Mrs. W. R., Fort Dodge
Tyler, Mrs. D. E., Fort Dodge
Tyrrell, Mrs. J. E., Manchester

Undem, Mrs. D. W., Spirit Lake
Updegraff, Mrs. R. R., Des Moines
Updegraff, Mrs. T. R., Waterloo

Vander Stoep, Mrs. H. L., Le Mars
Van Duzer, Mrs. W. R., Casey
Vangsness, Mrs. I. U., Sioux City
Van Natta, Mrs. C. W., Des Moines
Van Patten, Mrs. E. M., Fort Dodge
Vaubel, Mrs. E. K., Estherville
Veltman, Mrs. J. F., Winterset
Vercio, Mrs. R. A., Burlington
Vincent, Mrs. J. F., Fort Dodge
Vincent, Mrs. J. W., Sioux City
Vineyard, Mrs. T. L., Ottumwa
Voigt, Mrs. E. J., Burlington
Vorisek, Mrs. E. A., Des Moines
Vosika, Mrs. E. J., Shelby
Vruno, Mrs. M. J., Fulton, Ill.

Waggoner, Mrs. C. V., Clinton
Wagner, Mrs. D. J., Sioux City
Wainwright, Mrs. Max, Sioux City
Walker, Mrs. G. L., Burlington
Walker, Mrs. Leota, Ottumwa
Walliker, Mrs. W. M., Clinton
Ward, Mrs. D. F., Dubuque
Ward, Mrs. L. W., Oelwein
Ward, Mrs. T. L., Arnolds Park
Warner, Mrs. P. L., Des Moines
Warren, Mrs. E. T., Stuart
Waterbury, Mrs. C. A., Waterloo
Waterbury, Mrs. C. A., Jr., Waterloo
Watson, Mrs. C. F., Fairfield
Watters, Mrs. G. H., Des Moines
Weaver, Mrs. R. L., Cumberland
Weber, Mrs. L. E., Wapello
Weems, Mrs. N. E., Paullina
Wehman, Mrs. E. J., Burlington
Weikel, Mrs. V. E., Sioux City
Weih, Mrs. E. P., Clinton
Weingart, Mrs. J. S., Des Moines
Weir, Mrs. E. C., Council Bluffs

Wellman, Mrs. Thomas, Clinton
Wells, Mrs. R. C., Marshalltown
Wess, Mrs. F. L., Keokuk
West, Mrs. A. G., Council Bluffs
West, Mrs. N. D., Avoca
West, Mrs. W. E., Centerville
Westly, Mrs. S. S., Manly
Wetrick, Mrs. M. F., Grand Junction
Weybrauch, Mrs. R. A., Waterloo
Weyer, Mrs. J. J., Fort Dodge
Wheeler, Mrs. R. A., Des Moines
Whitaker, Mrs. B. T., Boone
White, Mrs. G. H., Des Moines
Whitehouse, Mrs. W. N., Ottumwa
Wichern, Mrs. H. E., Des Moines
Wicklund, Mrs. M. M., Waterloo
Wicks, Mrs. R. L., Boone
Widmer, Mrs. J. G., Wayland
Widmer, Mrs. R. B., Winfield
Wiedemeyer, Mrs. J. L., Sioux City
Wilcox, Mrs. D. E., Atlantic
Wildberger, Mrs. W. M., Perry
Wiley, Mrs. E. D., Sioux City
Wilke, Mrs. F. A., Perry
Willett, Mrs. W. J., Manchester
Wilson, Mrs. F. L., Sioux City
Wilson, Mrs. F. W., Sioux City
Winninger, Mrs. L. T., Waterloo
Wirsig, Mrs. A. O., Shenandoah
Wirtz, Mrs. D. C., Des Moines
Wolfe, Mrs. O. R., Marshalltown
Wolfe, Mrs. R. M., Marshalltown
Wolfe, Mrs. W. C., Ottumwa
Wolpert, Mrs. P. L., Onawa
Wolters, Mrs. D. E., Estherville
Woodard, Mrs. F. O., Des Moines
Woodburn, Mrs. C. C., Des Moines
Wooters, Mrs. R. C., Des Moines
Woods, Mrs. A. D., State Center
Wormhoudt, Mrs. H. L., Ottumwa
Worrell, Mrs. J. T., Keosauqua
Wubbena, Mrs. A. G., Rock Rapids

York, Mrs. D. L., Villisca
Young, Mrs. G. C., Des Moines
Young, Mrs. J. J., Clinton
Young, Mrs. R. A., Clarion
Yugend, Mrs. S. F., Indianola

Zager, Mrs. L. L., Waterloo

PAST PRESIDENTS OF THE WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

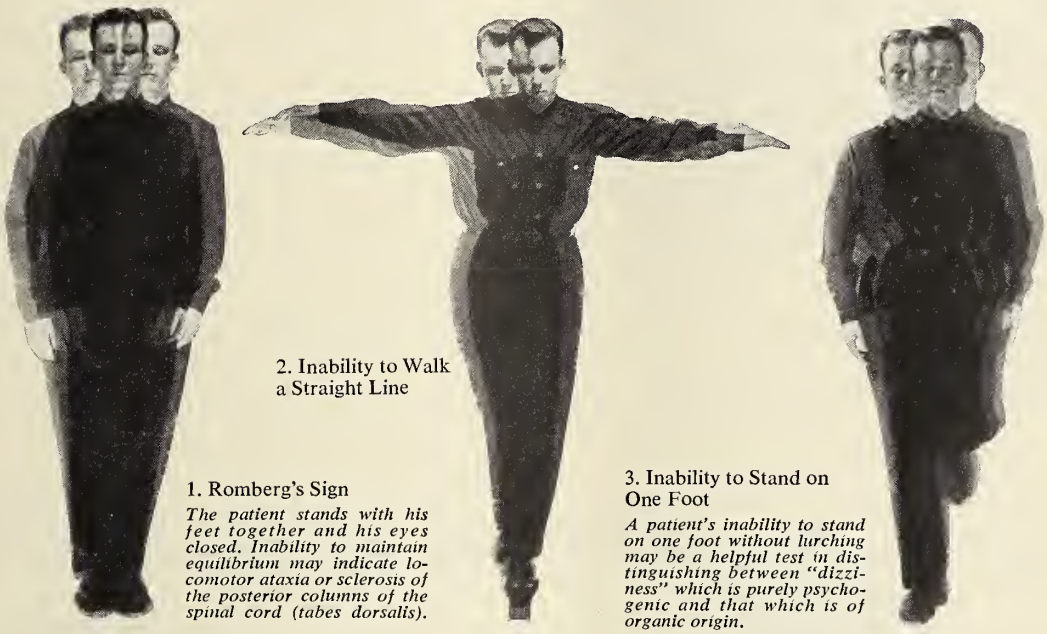
Mrs. M. N. Voldeng, Independence....1929
*Mrs. E. L. Bower, Guthrie Center....1930
*Mrs. Channing Smith, Granger....1931
*Mrs. P. M. McLaughlin, Sioux City....1932
Mrs. W. A. Seidler, Jamaica....1933
Mrs. J. A. Downing, Des Moines....1934
Mrs. M. C. Hennessy, Iowa City....1935
Mrs. C. A. Boice, Washington....1936
Mrs. S. E. Lincoln, Des Moines....1937
Mrs. D. W. Harman, Glenwood....1938
Mrs. E. A. Hanske, Bellevue....1939
Mrs. E. T. Warren, Stuart....1940
Mrs. W. R. Hornaday, Des Moines....1941
Mrs. F. W. Mulsow, Cedar Rapids....1942
Mrs. W. S. Reiley, Red Oak....1943
Mrs. J. C. Decker, Sioux City....1944
Mrs. S. S. Westly, Manly....1945
Mrs. M. H. Brinker, Jefferson....1946
Mrs. Fred Moore, Des Moines....1947
Mrs. A. G. Felter, Van Meter....1948
Mrs. R. M. Minkel (Sioux Falls, S. D.)....1949
Mrs. C. H. Mitchell, Cincinnati....1950
Mrs. H. W. Smith, Woodward....1951
Mrs. L. A. Coffin, Farmington....1952
Mrs. E. B. Hoeven, Ottumwa....1953
Mrs. L. R. Hegg, Rock Valley....1954

* Deceased

DRAMAMINE® IN VERTIGO

Notes on the Diagnosis and Management of "Dizziness"

II. False Dizziness



1. Romberg's Sign

The patient stands with his feet together and his eyes closed. Inability to maintain equilibrium may indicate locomotor ataxia or sclerosis of the posterior columns of the spinal cord (tabes dorsalis).

2. Inability to Walk a Straight Line

3. Inability to Stand on One Foot

A patient's inability to stand on one foot without lurching may be a helpful test in distinguishing between "dizziness" which is purely psychogenic and that which is of organic origin.

False dizziness is a sensation of sinking or lightheadedness which is often of psychogenic origin. It should be distinguished from true "dizziness" or vertigo[1] in which there is a definite whirling, moving sensation.

Unsteadiness, lightheadedness and similar manifestations of false dizziness[2] may be psychogenic or the result of arteriosclerosis, hypoglycemia, drug sensitivity and general metabolic disturbances such as anemia and malnutrition. Hypertension is often the cause of these symptoms.

Psychogenic dizziness probably originates at the highest brain centers. It may be described as a sense of uncertainty with occasional mild lurching but not to the point of falling. In these patients there is no nausea, no disturbance of vestibular pathways and otologic and neurologic examinations are negative. The sensation is unaffected by head movement. Symptoms usually disappear[3] with complete rest.

Dramamine® has been found highly effective in many of the conditions already mentioned. Maintenance therapy with Dramamine will often keep the patient from becoming incapacitated by his condition.

Dramamine is also a standard for the management of motion sickness and is useful for relief of nausea and vomiting of fenestration procedures and radiation sickness and for relief of "true dizziness" of other disorders.

Dramamine (brand of dimenhydrinate) is supplied in tablets (50 mg.) and liquid (12.5 mg. in each 4 cc.). G. D. Searle & Co., Research in the Service of Medicine.

1. Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.
2. DeWeese, D. D.: Symposium: Medical Management of Dizziness. The Importance of Accurate Diagnosis, Tr. Am. Acad. Ophth. *58*:694 (Sept.-Oct.) 1954.
3. Kunkle, E. C.: Central Causes of Vertigo, J. South Carolina M. A. *50*:161 (June) 1954.

SEARLE

WE CORDIALLY INVITE YOUR INQUIRY for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your eligible dependents.



SINCE 1902

ALL PREMIUMS COME FROM

PHYSICIANS SURGEONS DENTISTS

ALL BENEFITS GO TO

$4,500,000 ASSETS
$22,500,000 PAID FOR BENEFITS

PHYSICIANS CASUALTY AND HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

The Month in Washington

Washington, D. C.—This Congress appears to have established a record for the introduction of medical legislation—but unless something unusual happens and happens fast there will be no record set for laws passed.

With the summer well along, and tentative adjournment just a few weeks off, Congress had not yet revived its interest in medical bills. Most of the measures that were offered in January and February, to the accompaniment of hopeful speeches by their sponsors, have been allowed to lie undisturbed in committee files. In some cases hearings were held, where persons and organizations vitally interested could give enthusiastic testimony. Very few bills indeed got farther than that in the first six months of the session.

One reason is the close balance in Congress, and the reluctance of either party to get behind bills which have been offered by the other and which might have appeal to the public in the 1956 election year. Another is worry over putting the federal government still deeper into the red in a year of prosperity, if not of boom.

Also, key committees for weeks were preoccupied with various bills on Salk vaccine, its control and its cost—weeks when the committees otherwise might have worked on, and possibly reported out, other less controversial health bills. A specific example is the Senate Labor and Welfare Committee. This Committee was about ready to report out a House-passed bill for a national survey of mental health problems when it found itself deeply mired in the Salk situation. The mental health bill still is likely to be enacted, but the long delay didn't help much.

Another bill, early in the session regarded as about certain of enactment, calls for the establishment of a voluntary, contributory system of health insurance for federal civilian employees. After a year's study of the complications involved, a special task force prepared and made public the administration's program in January. The expectation was that a bill to carry out the plan would be offered in a few weeks at the most, and would be passed in a few months.

But it didn't work out that way. The administration decided that it couldn't press for these medical benefits (U. S. would pay about one-third of insurance premiums) until the extent of a general U. S. pay raise had been fixed by Congress. So it was June before this U. S. employee health insurance bill was even sent to Congress, and then the administration was in no rush to have it passed.

Troubles also beset the Defense Department's

bill to extend the doctor draft act another two years. Although the extension was strongly opposed by both the American Medical Association and the American Dental Association, the House Armed Services Committee accepted the Defense Department's arguments and voted out the bill, 24 to 0.

Ordinarily such a committee vote would have sent the bill sailing on through the House and to the Senate. But not this time. Chairman Howard Smith (D., Va.) of the House Rules Committee lectured the Armed Services Committee and the Defense Department for not making an effort to solve the doctor problem by some other means. There was consequently a delay before floor action—not fatal, but a delay.

Some bills, once considered important, were effectively ignored by Congress. One was the Eisenhower-Hobby plan for reinsurance of health insurance groups, defeated last year. The administration tenaciously defended it, but the committees weren't enough impressed to schedule hearings during the first six months of the session.

The administration bill for federal guarantee of construction loans for hospitals and clinics stirred some Capitol Hill interest, but no hearings have been held. Then came all the bills on polio vaccine, and this measure also was put on the shelf.

A bi-partisan bill for U. S. grants for constructing and equipping medical research facilities travelled about the same course: hearings, a high degree of enthusiasm from medical researchers, confidence that the plan would go through—then no more action.

For a time Senator Hill (D., Ala.), the key senator on health bills, was determined to put through his bill for federal aid for building medical schools. When hearings were held, the bill did not appear to arouse opposition from any quarter, yet it was pushed farther and farther to the rear.

Because this is only the first session of the 84th Congress, none of these bills will be irretrievably lost, even if not passed before adjournment. They hold whatever progress they have made, and many of them are certain to be important issues next year.

NO FAILURES AMONG SUI GRADUATES

The College of Medicine at SUI was one of 13 medical schools in the country whose 1954 graduates, without exception, passed licensure examinations. The others were Stanford, Georgetown, Chicago, Wayne, Albany, Buffalo, Rochester (New York), North Carolina, Utah, Washington (Seattle), Southern California and Colorado.

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
223 Locust Street Telephone 2-6766
Des Moines 9, Iowa

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

PERSONALS

Dr. John E. Krettek, of the Cogley Clinic at Council Bluffs, was made a diplomate of the American Board of Obstetrics and Gynecology in May.

Dr. R. D. Bernard, of Ames, was hospitalized at Mary Greeley Hospital there, on June 12, after a recurrence of his coronary difficulty.

Dr. Donald W. Ortmeyer, a 1954 graduate of the College of Medicine at SUI who is finishing his internship at Broadlawns Polk County Hospital, Des Moines, will join **Dr. John H. Faust** in practice at Manson in July.

On May 16, Governor Leo Hoegh announced appointment of the following physicians for two-year terms, each, on the Iowa State Board of Health: **Dr. Charlotte Fisk,** of Des Moines, **Dr. D. C. Conzett,** Dubuque, **Dr. F. H. Top,** Iowa City, **Dr. A. L. Yocum,** Chariton, and **Dr. S. P. Leinbach,** Belmond. Governor Hoegh said that none of the doctors whose terms were expiring had requested reappointment.

At Jefferson, **Drs. A. J.** and **Jean Jongewaard,** together with their son **Dr. Robert Jongewaard** and his wife, have bought a 28-acre suburban tract which they will subdivide, improve and sell as building lots.

Construction of a new office building for **Dr. J. G. Widmer** has been begun at Wayland.

Following the demolition of two small apartment houses at the intersection of Ingersoll Avenue and 28th Street, in Des Moines, ground was broken early in June for the construction of an orthopedic clinic for **Drs. D. W. Blair** and **F. E. Thornton.**

Dr. M. H. Bierman, Jr., of Council Bluffs, underwent surgery in May for the removal of two pieces of metal from one of his eyes. He had been about to make a house call and was getting out of his car when the tires of another vehicle cast the objects at him.

Dr. P. F. Tempel, formerly of Steamboat Rock, is practicing with **Dr. Werner Pelz** at Charles

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.,
4003 11th Street Place,
Telephone 3-3804

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates—1955

SURGERY—Surgical Technic, Two Weeks, July 25, August 8, September 12
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, August 8
Surgical Anatomy & Clinical Surgery, Two Weeks, August 22
Surgery of Colon & Rectum, One Week, September 19
General Surgery, Two Weeks, October 3
Gallbladder Surgery, Ten Hours, October 24
Thoracic Surgery, One Week, October 3
Esophageal Surgery, One Week, October 10
Fractures & Traumatic Surgery, Two Weeks, October 17

GYNECOLOGY—Vaginal Approach to Pelvic Surgery, One Week, November 7
Three-Week Combined Course, Gynecology and Obstetrics September 12

MEDICINE—Two-Week Course, September 26
Electrocardiography & Heart Disease, Two Weeks, October 10
Gastroscopy, One Week Advanced Course, September 12
Gastroenterology, Two Weeks, October 24
Dermatology, Two Weeks, October 17

RADIOLOGY—Clinical Diagnostic Course, Two Weeks, by appointment
Clinical Uses of Radioisotopes, Two Weeks, October 10

PEDIATRICS—Clinical Course, Two Weeks, by appointment
Pediatric Cardiology, One Week, October 10 and 17

UROLOGY—Two-Week Course, October 10

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand
Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand
Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

City, rather than in military service, as was mistakenly reported in last month's JOURNAL.

Dr. Paul E. Huston, professor of psychiatry, became head of the Department of Psychiatry at SUI on July 1. In that post, he succeeds **Dr. Wilbur R. Miller,** who will now have an opportunity to devote full time to his hospital administration work, teaching and treatment.

Dr. Paul Warner, an SUI College of Medicine graduate who has been in practice for two years at Des Moines, located recently in Wesley. The town had been without a physician since the death of **Dr. L. O. Snook,** in June, 1952.

Dr. E. B. Dawson, a Fort Dodge general practitioner, moved into a new office building early in May. The 50 x 30 foot structure adjoins his home.

Drs. Dwayne Howard and **William S. Thoman,** of Sioux City, and **Drs. M. M. Musselman** and **William Rumbolz,** of Omaha, were principal speakers at the annual Sioux Valley Memorial Hospital medical meeting at Hotel Lewis, in Cherokee, on May 12.

Dr. J. F. Hardin has announced his intention of constructing a business block, consisting of a theatre and two stores, in Bedford. He made the following statement to his town's newspaper: "This community is to be my home for the rest of my life. My wife, my son and I appreciate all our friends here, and our decision to give this community a theatre is one way of showing our appreciation of what this community has done for us. We are doing this for present and future generations."

Drs. Andrew C. Garvy and **Charles R. Eicher,** of Iowa City, have moved from 108½ E. Washington Street to 1027 Rochester Avenue, where they will have more commodious quarters.

Late in June, **Dr. John T. McCoy** began a tour of Navy duty with the rank of lieutenant. He has practiced in Cedar Falls during the past four and a half years.

During the first two weeks in May, **Dr. William B. Bean,** head of the Department of Internal Medicine at SUI, acted as visiting-physician-in-chief in conducting clinics and making ward rounds at the Rhode Island Hospital, in Prov-

idence, addressed the Rhode Island Medical Society on "Neglected Aspects of the Tongue in Medical Practice," and addressed a meeting of the National Nutrition Foundation, at Sky Top, Pennsylvania. The Nutrition Foundation subsidizes research at SUI in which Dr. Bean has been active.

On April 20, **Dr. H. W. Smith,** of Woodward, escaped serious injury in an accident that seriously damaged his car. He sustained no more than some bruises and scratches.

Dr. L. B. Williams, of Maquoketa, has been appointed to fill a vacancy on his town's school board.

In addressing the Johnson County Medical Society, on May 4, about plans for the handling of casualties in case a nearby area such as the Quad Cities were the target of an atomic attack, **Dr. Sidney Ziffren** said that the first step would be to move all patients out of University and V-A hospitals to make room for the new patients. "We would have to take over every dormitory in town, the field house, fraternities and sororities to take care of the injured," he said. Pediatricians would have to become surgeons, ancillary medical personnel would have to be upgraded, and thousands of attendants would have to be recruited from the general population. Dr. Ziffren used materials that he had received during a two-week meeting of medical and military personnel held recently in Washington, D. C.

Dr. Jesse C. Moore, of Eldon, a Life Member of the Iowa State Medical Society, passed the fiftieth anniversary of his certification on June 1. Because he is 77 and in poor health, he carries on no more than a limited practice, but he is the only physician in Eldon.

Dr. A. D. Blenderman, who has engaged in general practice at Paullina during the past seven and a half years, left there on June 1 to undertake a residency in orthopedic surgery at St. Luke's Hospital, Kansas City, Missouri.

Dr. E. F. Beeh, of Fort Dodge, with his wife, sailed from New York on May 11, aboard the *Queen Mary,* for Europe. In addition to sightseeing in a number of countries, Dr. Beeh plans to attend the meeting of the International College of Surgeons, in Geneva, and surgical clinics in Heidelberg. He and Mrs. Beeh plan to return at the end of July.

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York



The Best Tasting Aspirin you can prescribe

The Flavor Remains Stable down to the last tablet

Bottle of 24 tablets 15¢ (2½ grs. each)

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.

Dr. T. L. Griffith, of Mason City, recently completed requirements for the diploma of the American Board of Urology. He has been a staff member at Park Hospital since July, 1953.

Dr. P. S. Hench, of the Mayo Clinic, delivered the Joseph Graham Mayo lecture on Monday, May 9, at the SUI College of Medicine on the subject, "Cortisones and Corticotrophins in Rheumatic Disease." The lecture, an annual event, is in memory of a physician who graduated from the College.

Dr. Hermann M. Burian, SUI ophthalmologist, addressed the annual convention of the Illinois State Medical Society, in Chicago May 17, on the correction of cross-eyedness in children.

Work started during the last week in May on a new office building in Lake Park which is to be occupied by the newly arrived doctor of medicine there, **Dr. R. J. Coble,** and by a dentist, **Dr. M. E. Miller.** It is being financed by local businessmen and will be leased to the doctors.

Dr. Marvin J. Colbert, a specialist in internal medicine, will join the staff of the Steele Memorial Clinic in Belmond on August 1. He is a graduate of the medical school at Boston University, he interned at Presbyterian Hospital, Chicago, and he has been a resident at the V-A hospital in Boston and at the University of Illinois hospitals. For 21 months during the Korean war, he was a captain in the Army Medical Corps.

Dr. J. C. MacQueen, of the Department of Pediatrics at SUI, recently was named a fellow of the American Academy of Pediatrics.

Dr. Lloyd E. Caauve, who has been associated with Dr. Burns Byram at Marengo since last November, has accepted a position in industrial medicine with the Carter Oil Company, at Tulsa, Oklahoma.

Dr. John Greenleaf, of Iowa City, was wounded in the arm on the night of May 30, when a man whom he had treated for diabetes a year or more earlier forced his car to the curb on a residential street and fired three revolver shots in his direction. At latest report, his assailant was under observation at the State Psychopathic Hospital.

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

With "Premarin," relief
of menopausal distress is
prompt and the "sense of well-being"
imparted is highly gratifying
to the patient.

"Premarin"® —Conjugated Estrogens (equine)

5513

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.



Dr. J. A. Broman has completed two years' service in the Army Medical Corps at Ft. Sill, Oklahoma, and has resumed his medical practice at Maquoketa. Practicing with him, is **Dr. Paul F. Brown**, a graduate of the school of medicine at Washington University, St. Louis. Dr. Brown interned and served a one-year residency in pediatrics in Fresno, California, and for three years since then has been medical director of the Methodist Mission Hospital at LaPaz, Bolivia.

Dr. Irving Sternhill left Mason City on June 7 to associate himself in practice with a medical group in Van Nuys, California. Except for the five years that he spent in military service, he has been in Mason City since 1938.

Dr. June Fisher, a senior resident at University Hospitals, Iowa City, has been given a Trudeau fellowship for the year beginning July 1, to finance her research in pulmonary disabilities such as fibrosis, emphysema and asthma.

Dr. H. G. Parker, who has practiced at Hampton during the past year, moved to Smithville, Missouri, on June 1, and **Dr. D. K. Benge** has moved his general practice from Dows to Hampton.

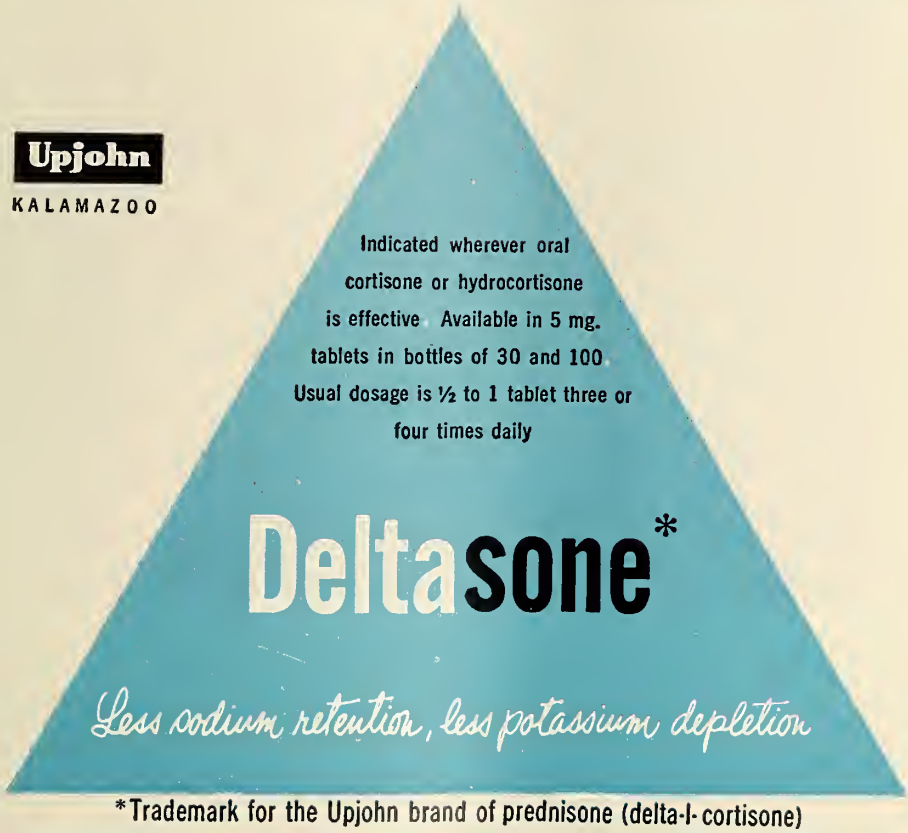
Physicians from all parts of Iowa and from seven other states attended a dinner in Iowa City on June 3, in honor of **Dr. H. Dabney Kerr**, who recently resigned the headship of the Radiology Department at SUI. He received a Jeep station wagon as a going-away present.

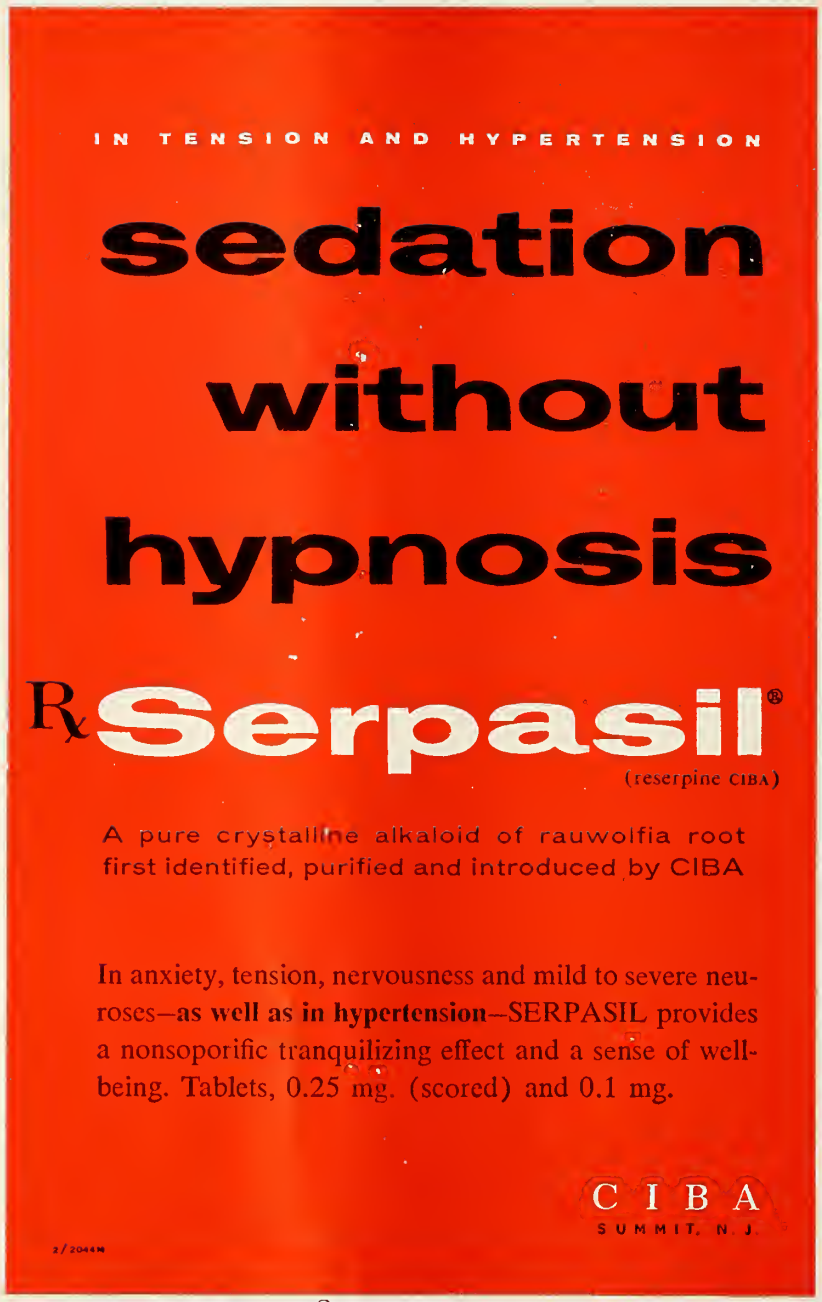
Dr. Wm. Mott, of Farmington, a Life Member of the Iowa State Medical Society, entered Sacred Heart Hospital, Fort Madison, on May 25, for observation.

Dr. Raymond G. Bunge, professor of urology at SUI, has been elected secretary of the American Urological Research Foundation by the organization's board of trustees.

Dr. A. R. Anneberg, an EENT specialist in Carroll, was elected president of the Iowa Association for Retarded Children at the close of that group's annual meeting in Waterloo on June 5.

Dr. Evelyn M. Anderson, has joined **Dr. Helen**





New! SERPASIL® ELIXIR
Each 4-ml. teaspoonful contains 0.2 mg. of Serpasil

Foot-so-Port Shoe Construction and its Relation to Center Line of Body Weight



1. The highest percent af sizes in the shae business are sald in Faat-sa-Part shaes ta the big men and wamen wha have faund that Faat-sa-Part canstructian is the strangest, because .....

- The patented arch suppart canstructian is guaranteed nat ta break dawn.
- Special heels are langer than mast anatamic heels and maintain the appearance af narmal shaes.
- Insale extensian and wedge at inner carner af the heel where suppart is mast needed.
- Innersales are guaranteed nat ta crack, curl, ar callapse. Insulated by a special layer af Texan which alsa cushions firmly and unifarmly.

2. Faot-sa-Part lasts were designed and the shae canstructian engineered with the assistance af many tap arthapedic dactars. We invite the members af the medical prafessian ta wear a pair — prave ta yaurself these statements.

3. We make mare pairs af custam shaes far palia feet and all types af abnarmal feet than any ather manufacturer.

FOOT-SO-PORT SHOES far Men, Wamen, Children

There is a **FOOT-SO-PORT** agency in all leading tawns and cities. Refer ta yaur Classified Directary

Foot-so-Port Shoe Company, Oconomowoc, Wis.

specify

LEDERLE

POLIOMYELITIS IMMUNE GLOBULIN

(human)

Lederle

For the modification of measles and the prevention or attenuation of infectious hepatitis and poliomyelitis.

LEDERLE LABORATORIES DIVISION

American Cyanamid company Pearl River, New York

Upjohn

KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective • Available in 5 mg. tablets in bottles of 30 and 100 • Usual dosage is ½ to 1 tablet three or four times daily

Delta-Cortef*

Fewer side effects at effective dosage levels

*Trademark for the Upjohn brand of prednisolone (delta-l-hydrocortisone)

Johnston in the practice of internal medicine in Des Moines. Dr. Anderson is a graduate of the College of Medicine at SUI, she received her post-graduate training at the University of Colorado, at Milwaukee County Hospital and at SUI, and has practiced for 18 months in Madison, Wisconsin.

On June 1, **Dr. Margaret Loseke** terminated her association with **Dr. H. M. Andersen,** at Strawberry Point, and moved to Des Moines, where her husband is in the employ of a publishing firm. She plans shortly to begin practice there.

The "Your Health" television broadcast over the State College station at Ames, entitled "Facts and Misconceptions About Psychiatry" and featuring **Dr. Paul Kersten,** of Fort Dodge, was interrupted twice because of the failure of a pump located in the transmitter. Plans for a rebroadcast are being considered.

A pediatrician, **Dr. F. G. Dannenbring,** has joined the staff of the Kersten Clinic, at Fort Dodge. He graduated from the College of Medicine at SUI in 1949, and served an internship and a residency at the Fitzsimmons Hospital, in Denver. Following several other military assignments, one of which was in Germany, he has been chief of pediatrics at the Lowry Air Force Base Hospital, in Denver.

The promotion of **Dr. Paul T. O'Keefe,** of Waterloo, to the rank of Lt. Col. in the Army Medical Corps Reserve was announced on May 20.

Dr. Margaret Butler, who retired this year as school physician at Fort Dodge, left on May 20 for a tour of Europe. She expects to return in the fall.

Dr. Alton Knosp, who recently completed a residency at Methodist Hospital, Omaha, has replaced **Dr. Kriss Kerr** in practice at Paton. Dr. Kerr plans to take a residency in radiology at the Cleveland Clinic.

The Lutheran Church of Estherville has made a contribution of $75 to the Educational Fund of the Iowa State Medical Society, in memory of the late **Dr. C. S. Kirkegaard.** Loans from the Educational Fund are made to medical students who need help in financing the completion of their training.

Relax the best way
...pause for Coke



Time out for refreshment

DRINK Coca-Cola REG. U.S. PAT. OFF.



ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of June 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland) Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.) .....Lt., U.S.N.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Bickford, R. H., Iowa City
(Lawton, Oklahoma) .....A.U.S.
Blaha, Vernon B., Marshalltown
(Great Lakes, Illinois) .....Lt. Comm., U.S.N.R.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Brennan, J. E., Des Moines
(Camp Pendleton, Calif.) .....Lt., U.S.N.R.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
(Marine Corps Recruit Depot, San Diego, Calif.) .....Lt.(j.g.), U.S.N.R.
Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Eckberg, R. A., Hubbard
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Brooke Army Med. Ctr., Ft. Sam Houston, Texas) .....Capt., A.U.S.
Farrior, Richard T., Iowa City
(Tampa, Florida) .....
Field, C. A., Cresco
(Manhattan, Kans.) .....Capt., A.U.S.
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Godbey, M. E., Mt. Pleasant
(A.P.O. 862, New York City) .....Capt., U.S.A.F.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.
Hach, Felix, Ankeny .....
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.



St. Joseph Sanitarium

Supervision Sisters of Mercy
P. O. Box 236
DUBUQUE, IOWA
or phone 3-8291 for information

Mild Mental and Nervous Cases
also
Convalescent and Rest Patients
Shock Therapy Hydrotherapy
Occupational Therapy
COMPETENT STAFF

PICKER X-RAY CORPORATION
of Iowa

Picker x-ray OF IOWA

DAVENPORT DES MOINES
SIOUX CITY WATERLOO
OMAHA

An Iowa Corporation
To Serve the Profession of Iowa
J. K. DUNN, *Vice President*

SALES
SERVICE
SUPPLIES
X-RAY
AND
ELECTROMEDICAL
EQUIPMENT

50 *and eight years*

Treating Alcohol and Drug Addiction



RALPH CLINIC

Formerly The Ralph Sanitarium

A Department of the Benjamin Burroughs Ralph Foundation for Medical Research

Ralph Emerson Duncan, M.D., Medical Director.

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone VIctor 3624

Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hodges, R. E., Iowa City
(Silver Spring, Maryland) .....Capt., A.U.S.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City
Grosse Isle, Michigan) .....N.A.S.
Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Judiesch, K. J., Iowa City
(Ft. Sam Houston, Tex.) .....1st Lt., A.U.S.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.) .....
Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.
Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Maxwell, J. R., Iowa City
(Tacoma, Washington) .....Capt., A.U.S.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Nielsen, G. E., Des Moines
(APO Seattle, Washington) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Olson, Steward O., Des Moines
(Great Lakes Naval Training Station) .....
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Reading, Donald, Iowa City
(U.S. Army Examining Station, Des Moines) .....
Rodgers, G. H., Mt. Ayr
(Brooke Army Hosp., Ft. Sam Houston, Texas)
.....Lt. A.U.S.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Bethesda, Maryland) .....Lt., U.S.N.R.
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Denver, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.
Stivers, T. W., Des Moines
(Hutchinson, Kansas) .....Lt. (jg) U.S.N.R.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Swanson, Eric M., Iowa City
(Omaha, Nebraska) .....
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(11th Field Hosp., APO 178, New York City)
.....Capt., A.U.S.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wall, J. M., Boone
(Bryan A.F.B., Texas) ..... 1st Lt., U.S.A.F.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st Lt., U.S.A.F.
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven
(New London, Connecticut) .....U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.

NEW JERSEY PRAISES TENNESSEE

Most medical societies do, indeed, take an active and unselfish part in community health planning. Few, however, go as far as the Tennessee Medical Association did last year. It was discovered that within a hundred miles of the world's greatest gold depository, there was a community that not only had no hospitals; it had no doctors. Disease rates and infant mortality rates in this simulacrum of Dogpatch were about the highest in Tennessee. And Tennessee rates are not the lowest in the country. Here is where the Tennessee Medical Association came in. They established and financed a special foundation. The foundation brought in a full-time physician, a young doctor of unquestioned competence. The foundation built, equipped and opened a clinic for him. The Medical Association arranged for a panel of circuit-riding specialists to visit the community at regular intervals and to serve on call for emergencies. By now other community agencies are pitching in to lighten the burden on the Medical Association. This is one of the most vigorous examples of medical society leadership in recent years.

—Editorial in the JOURNAL OF THE NEW JERSEY MEDICAL SOCIETY, December, 1954.

PHYSICIANS' DIRECTORY

SURGERY

JULIAN M. BRUNER, M.D.
PRACTICE LIMITED TO
PLASTIC SURGERY AND SURGERY OF THE HAND
DES MOINES, IOWA
1005 BANKERS TRUST BUILDING PHONE 4-4835

ORTHOPEDICS

EVERETT M. GEORGE, M.D.
PRACTICE LIMITED TO
ORTHOPEDIC SURGERY
DES MOINES, IOWA
1010 EQUITABLE BUILDING PHONE 3-2828

VERL A. RUTH, M.D.
PRACTICE LIMITED TO
FRACTURES
913 BANKERS TRUST BUILDING
DES MOINES, IOWA

BRONCHOSCOPY AND ESOPHAGOSCOPY

JAMES A. DOWNING, M.D.
ROBERT R. UPDEGRAFF, M.D.
HAROLD J. McCOY, M.D.
614 BANKERS TRUST BLDG. DES MOINES, IOWA

BYRON M. MERKEL, M.D.
CHESTER C. WOODBURN, JR., M.D.
DES MOINES, IOWA
501 EQUITABLE BUILDING PHONE 4-3179

NEUROSURGERY

WALTER D. ABBOTT, M.D.
JOHN T. BAKODY, M.D.
PRACTICE LIMITED TO
NEUROSURGERY
DES MOINES, IOWA
900 DES MOINES BUILDING PHONE 3-5156

oad-spectrum, outstanding efficacy



Chloromycetin®

for today's problem pathogens

Because of increased frequency of resistance of pathogenic microorganisms to available antibiotics,[1,2] sensitivity studies provide criteria helpful in selection of the most effective agent. Recent *in vitro* studies and clinical experience emphasize the outstanding efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) against microorganisms commonly encountered in patients with severe urinary tract infections.[1-8] "For severe urinary infections, chloramphenicol has the broadest spectrum and is the most effective antibiotic."[1]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References (1) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* 5:365, 1955. (2) Balch, H. H.: Mil. Surgeon 115:419, 1954. (3) Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W., & Elstun, W.: *J.A.M.A.* 157:305, 1955. (4) Kutscher, A. H.; Sequin, L.; Lewis, S.; Firo, J. D.; Zegarelli, E. V.; Rankow, R., & Segall, R.: *Antibiotics & Chemotherapy* 4:1023, 1954. (5) Clapper, W. E.; Wood, D. C., & Burdette, R. I.: *Antibiotics & Chemotherapy* 4:978, 1954. (6) Sanford, J. P.; Favour, C. B.; Harrison, J. H., & Mao, F. H.: *New England J. Med.* 251:810, 1954. (7) Sanford, J. P.; Favour, C. B., & Mao, F. H.: *J. Lab. & Clin. Med.* 45:540, 1955. (8) Felshin, G.: *J. Am. M. Women's A.* 10:51, 1955.

MEDICAMENTA VERA

PARKE, DAVIS & COMPANY DETROIT, MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV AUGUST, 1955 No. 8

CONTENTS

Carcinoma of the Lung
Fay H. Squire, M.D., Chicago, Illinois . . 409
Chronic Alcoholism
Robert C. Larimer, M.D., Sioux City . . 415
Gastro-Esophageal Hiatal Hernia, Diagnosis and Treatment
Anthony H. Kelly, M.D., Sioux City . . 418
Fundamental Errors in Anesthesia
Stuart C. Cullen, M.D., Iowa City . . . 421
The General Practice of Otolaryngology
Oral L. Thorburn, M.D., Ames 425

EDITORIALS

Foul Ball! 429
The Legislature's Record 430
Diagnosis of Neoplasm From Serous Effusion 431
AMA House of Delegates 431
Mr. Ray Stewart 432

SPECIAL DEPARTMENTS

Coming Meetings 428
President's Page 433
County Societies
Meetings 434
Deaths 434
The Doctor's Business 435
The Journal Book Shelf 438
Mental Illness 439
Iowa Academy of General Practice . . . 440
State Department of Health 442
Woman's Auxiliary News 445
Speakers' Bureau Schedules 448
Blue Cross-Blue Shield 450
The Month in Washington xx
Personals xxiv
Roster of Iowa Physicians in Military Service . xxxvii

MISCELLANEOUS

Live Rabies Vaccine 427
Postgraduate Courses in Chest Diseases . . 427
Renal Injury Produced by Boxing . . . 432
Institute of Agricultural Medicine . . . 434
Upper Des Moines Valley Medical Society . 440
Scurvy in Iowa—A Case Report 441
Nutrition Education at the Supermarket . . 441
New Manual for Medical Assistants . . . 441
Menstrual Taboos 444
AMA Public Relations Institute 444
Au^{198} Effective in Prostatic Cancer . . . 444
A Risk of Heavy Earrings 449
Psychosomatic Problems 449
A New Philanthropy in Wisconsin . . . 449
Twilight of the Waiting Room 449
Inter-Society Cytology Council xxi
Postgraduate Assembly on Endocrinology . . xxii
Minnesota Symposium on Arteriosclerosis . . xxii
Medicolegal Symposia xxxvii
Rules of AMA Judicial Council . . . xxxviii

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
EDWARD W. HAMILTON, Ph.D., Asst. Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

FRED STERNAGEL, M.D.....West Des Moines
GEORGE H. SCANLON, M.D.....Iowa City
ERNEST M. KERSTEN, M.D.....Fort Dodge
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103. Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

Scientific Articles

Carcinoma of the Lung

FAY H. SQUIRE, M.D.

Chicago, Illinois

From the medical literature it is apparent that the incidence of carcinoma of the lung has increased markedly in the past 20 years. It approaches being the No. 1 visceral neoplasm in males, and the incidence in females is alarming. This is true of foreign populations, as well as of the people of the United States.

At Presbyterian Hospital, Chicago, during the past two and a half years, we have seen over 50 patients in whom a tissue diagnosis of primary carcinoma of the lung has been made. Twenty of them had resectable tumors. The majority of them were between the ages of 50 and 80, but a minor concentration of cases fell into the 30-40 year bracket.

These patients can be separated into two groups, one of them asymptomatic, and the other symptomatic when first seen. The asymptomatic cases are best detected on routine chest x-ray. Some patients show rather extensive tumors, despite exhibiting no symptoms. Usually they have small nodules in the lung parenchyma, localized areas of emphysema, or slightly clouded zones of atelectasis. The asymptomatic patients offer the better chances of cure, for many of their tumors are localized in the periphery of the lung and can be removed before they begin metastasizing. The symptomatic group have histories of cough, often producing blood-tinged sputum. Some of their tumors may be small and located in the main bronchi near the hila of the lungs. More often in them than in the asymptomatic patients, the tumors are large and present as a pneumonia that does not clear, or as an atelectasis that may involve a segment of a lobe or an entire lung. The atelectatic lung often shows necrosis and abscess formation. The tumor may slough and present as an abscess cavity. Two of our cases presented rheumatic-like pains in the knees and hands (pulmonary osteoarthropathy). Still others are suspected because the presenting symptoms have been caused by metastasis to the brain or bones.

Dr. Squire is professor of radiology at the Rush Medical College of the University of Chicago and director of the Department of Radiology at Presbyterian Hospital, Chicago.

X-RAY IN DIAGNOSIS

Many special x-ray procedures can be used to investigate these lesions further. Of these, the PA and lateral roentgenograms made on inspiration and expiration will show the nodules and the areas of atelectasis and emphysema. Fluoroscopy will help with the localization and rule out pulsations of vascular masses. Bronchograms have been used extensively to show the obstructions to the bronchus. In our hands, laminagrams have been of most help because they rule out the calcifications of tuberculosis, show the obstruction to the bronchus, and many times delineate mediastinal lymph nodes not visualizable by other means. In rare instances we have made angiocardiograms to differentiate tumor from enlargement of the heart or great vessels. The final positive diagnosis is still made by tissue examination, and this may be obtained by bronchoscopic examination either with direct biopsy or with washings obtained from the bronchus involved. If tumor cannot be definitely ruled out by the above procedures, exploratory examination is carried out. The mortality of this procedure is nil at our hospital, and we do not hesitate to recommend it even for seemingly innocent lesions. Of the small, rounded coin lesions in the lung found by means of roentgenograms, 15 per cent are proved malignant at operation.

I believe the best way of presenting the subject is to show roentgenograms of a group of patients who exhibited characteristic lesions. All but one of these patients are proved cases of carcinoma of the lung.

CASES

Roentgenography of the chest of a 49-year-old woman (Figure 1) revealed a small nodule at the fourth rib anteriorly on the right. Laminagraphy showed this to contain laminated calcification which, at operation, proved to be a tuberculoma. In our series all of the lesions showing calcification have been benign.

The chest of the 43-year-old woman shown in Figure 2 was normal on first examination. Six months later, as the x-ray at the left discloses, there was a small, round tumor in her right main bronchus near the mediastinum. A small, round density can be seen below this, partially obscured by the diaphragm. Bronchoscopy was negative. Laminagraphy (the right-hand picture) shows the lower, smaller shadow to contain calcium, but the larger shadow revealed no calcium and was thought to represent a carcinoma. At surgery, that latter diagnosis was verified, and the calcified area was found to be a hamatoma.

Figure 3 shows a 35-year-old woman who was in early pregnancy. Routine roentgenogram shows a very small nodule at the level of the right third rib, with a small area of atelectasis. It should have been operated, but the patient was allowed to continue with her pregnancy. One year later, the tumor had increased in size, as is shown in the right-hand picture, but it still appeared small as compared with many tumors when first visualized. This set of pictures demonstrates the slow growth of some bronchogenic carcinomas. Operation revealed mediastinal involvement, and the patient died of widespread metastases.

In Figure 4, pictures taken of a female 82 years old, one can note a small nodule in the periphery of the right mid lung field, with involvement of mediastinal glands, which are producing atelectasis of the right lower lobe. The laminagram clearly delineates the extent of the disease.

Figure 5 is a set of pictures taken of a male 62 years old. There is a small nodule in the first interspace on the right. The laminagram shows the surprising extent of the tumor.

The 40-year-old man pictured in Figure 6 had symptoms of rheumatoid pains in his hands and knees. X-ray examination showed clubbing of his fingers and periosteal changes of pulmonary osteoarthropathy. The chest roentgenogram reproduced here shows a small tumor of the right lower lung that proved inoperable.

In Figure 7, pictures taken of a male 63 years old, tumor obstructs the bronchus to the right upper lobe. The laminagram shows large mediastinal glands. Inoperable.

In the 65-year-old man whose chest is shown in Figure 8, there was a small nodule at the second rib level on the right. It was watched for nine months, and during that time it increased to a large tumor. Inoperable.

A large abscess cavity with a fluid level in the left lung field is to be seen in Figure 9, pictures of a male 44 years old. It represents a sloughed tumor, with infection.

In the pictures of a 59-year-old woman shown herewith as Figure 10, one can note a small nodule at the apex of the left lung without demonstrable rib involvement (Pancoast's tumor). This patient died with spine metastasis 18 months after operation.

The small mass in the left upper hilum of the 53-year-old man shown in Figure 11 was proved

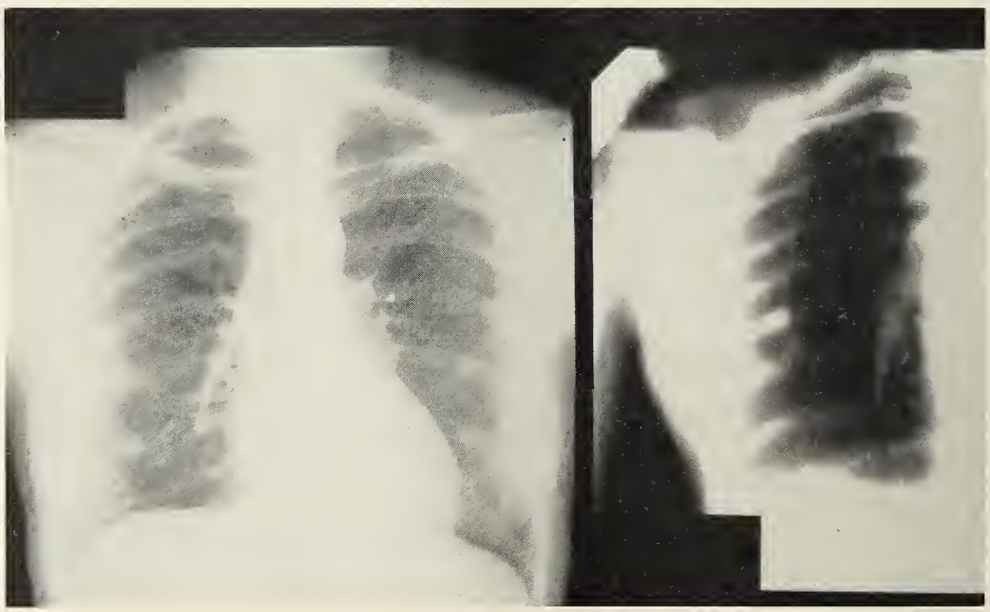


Figure 1

by arteriography to be a tumor, rather than a vascular lesion.

CONCLUSION

It is easy to make the diagnosis of carcinoma of the lung after the patients have begun exhibiting symptoms. But one must bear in mind that of the patients who present symptoms and come to surgery, between 90 and 98 per cent will die within five years.[1] Of the patients with inoperable lesions who are treated palliatively, 99 per cent will be dead within two years. In the asymptomatic group, 90 per cent of the lesions will be resectable. No lymph node metastasis will be demonstrated in 75

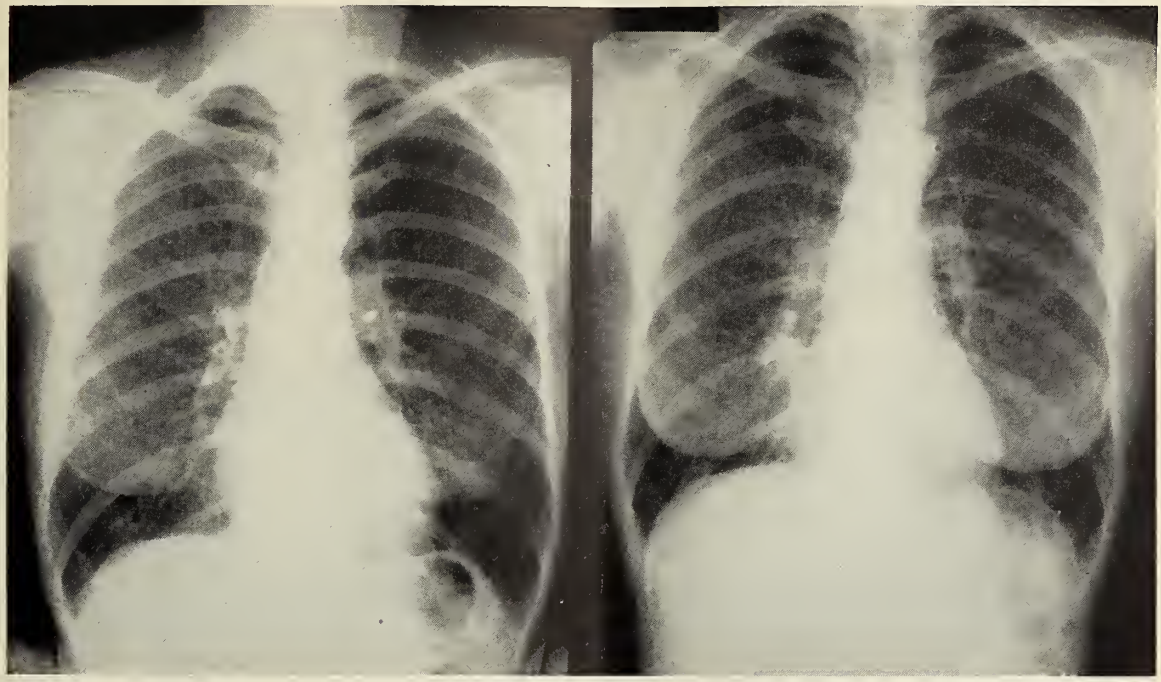


Figure 2A

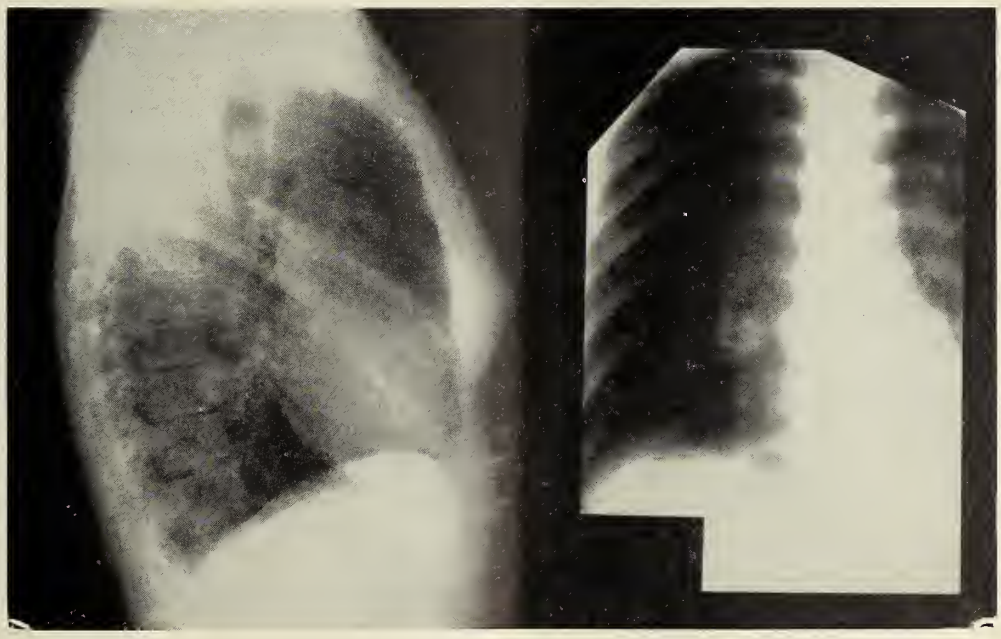


Figure 2B

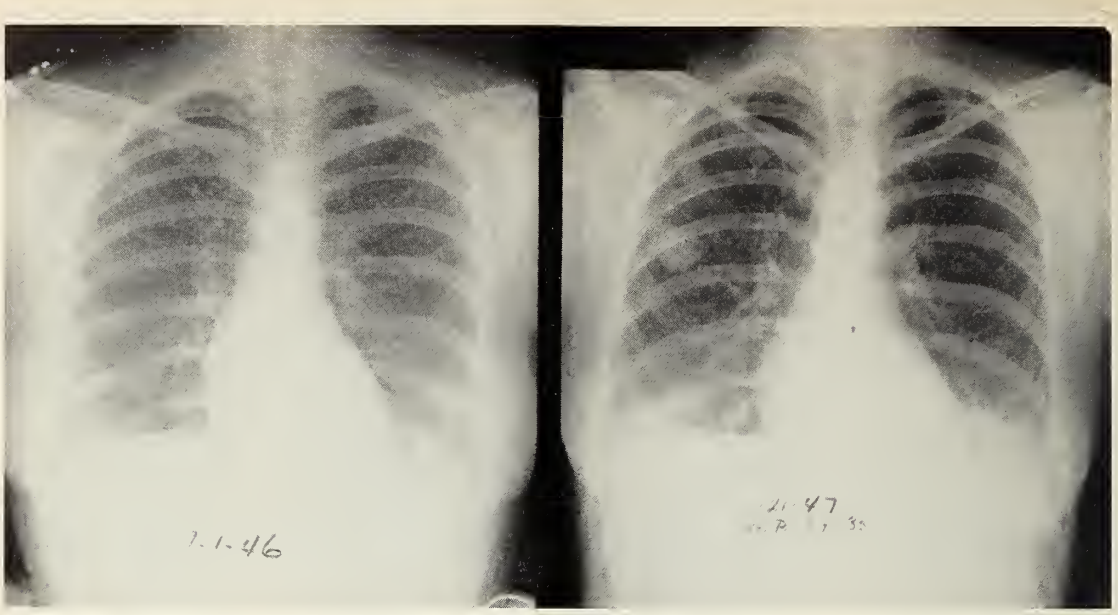


Figure 3

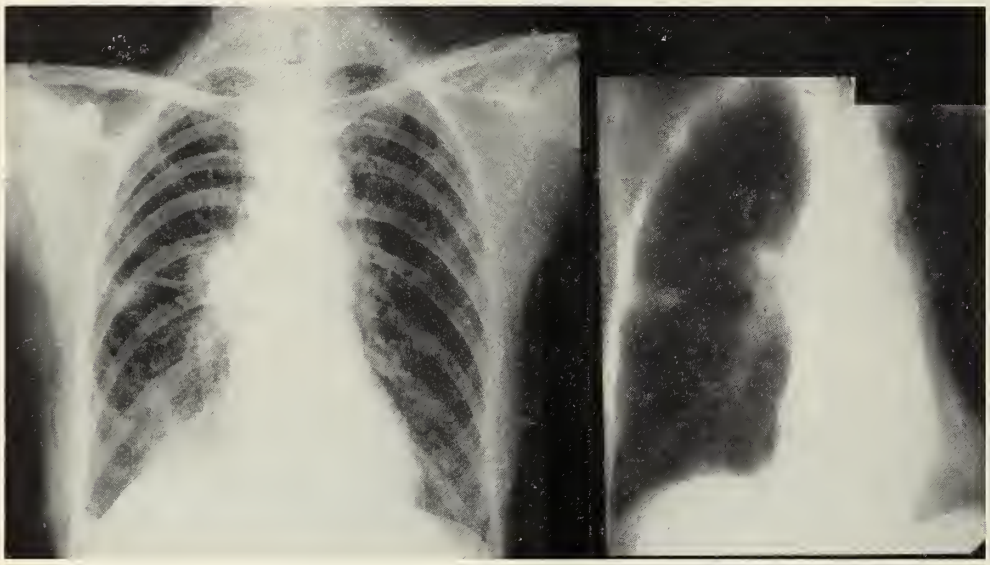
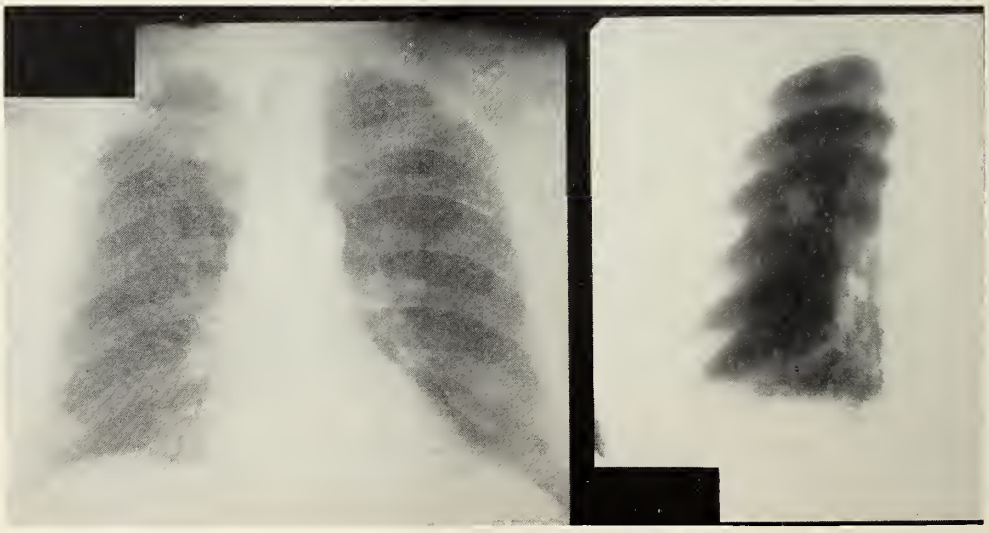


Figure 4

Figure 5



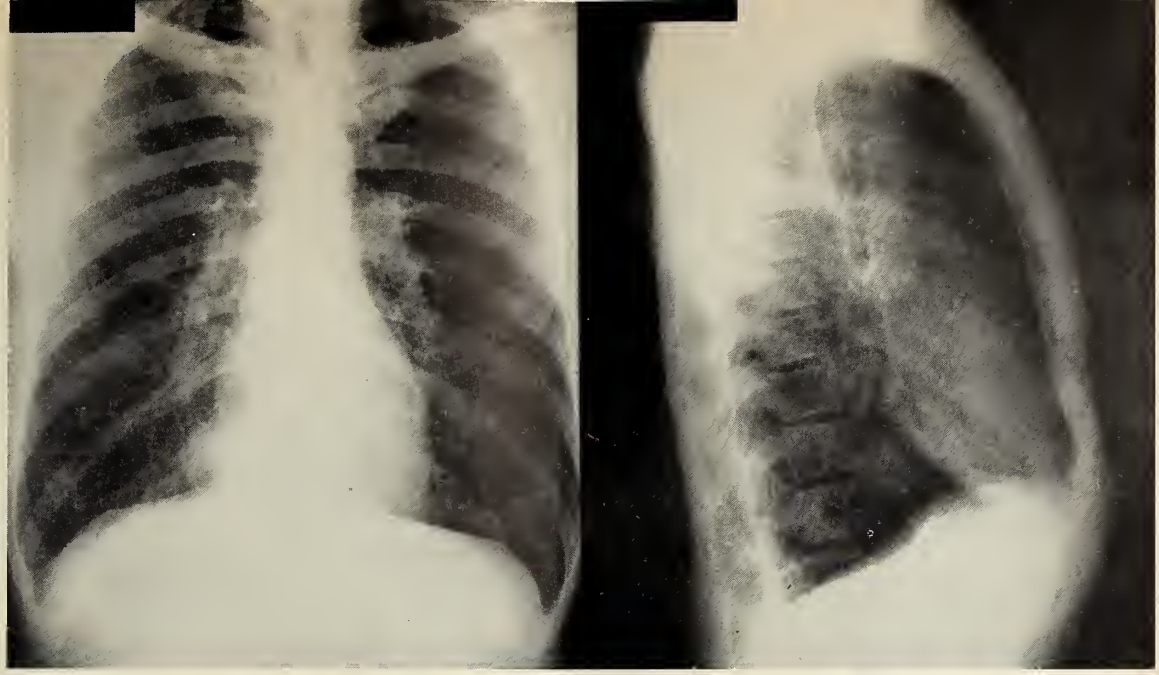


Figure 6

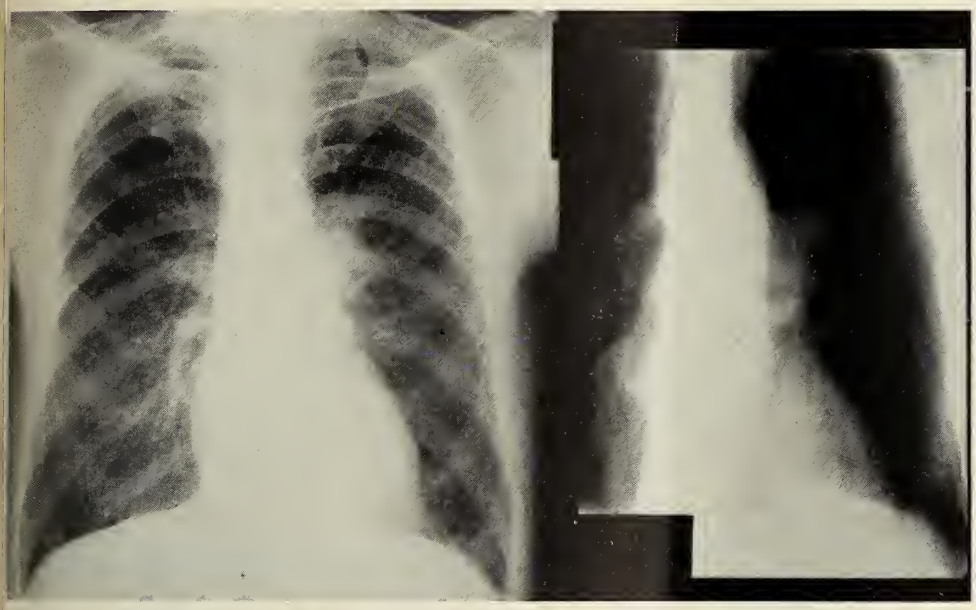


Figure 7

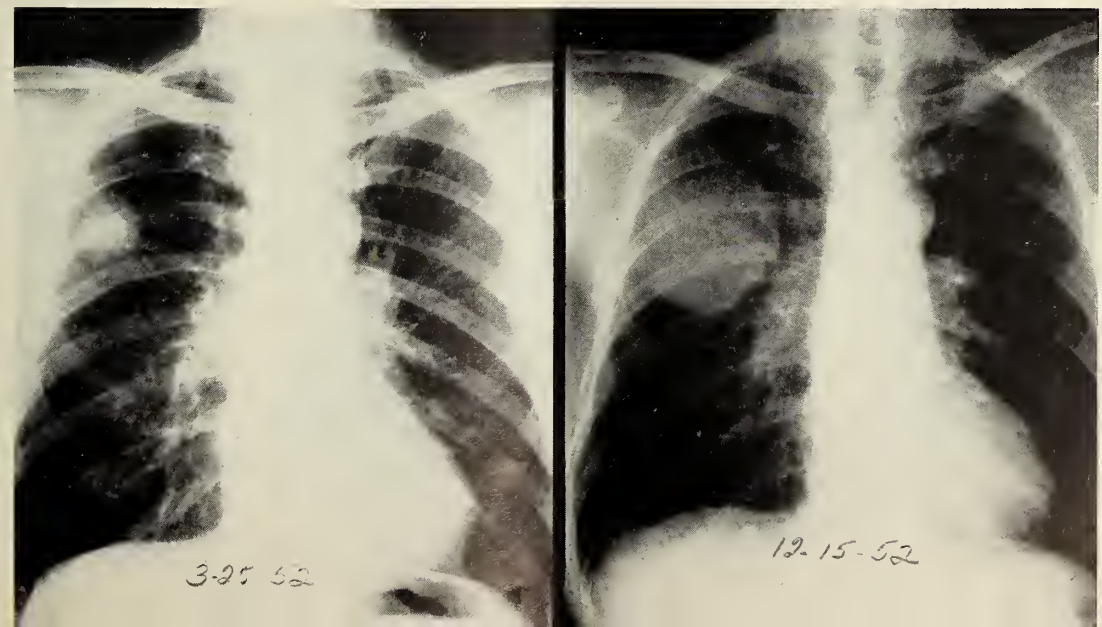


Figure 8

Figure 9

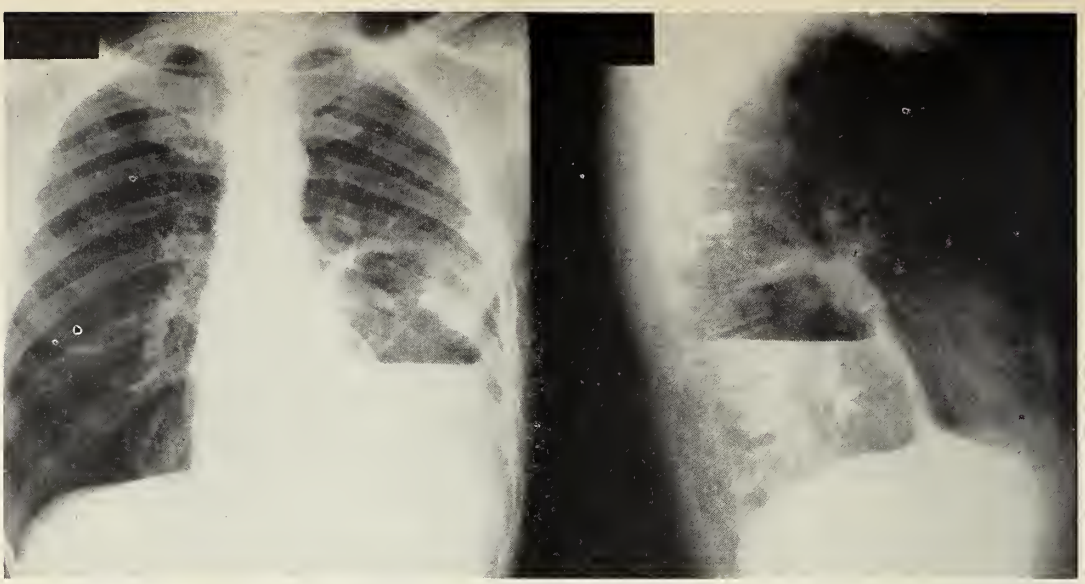


Figure 10





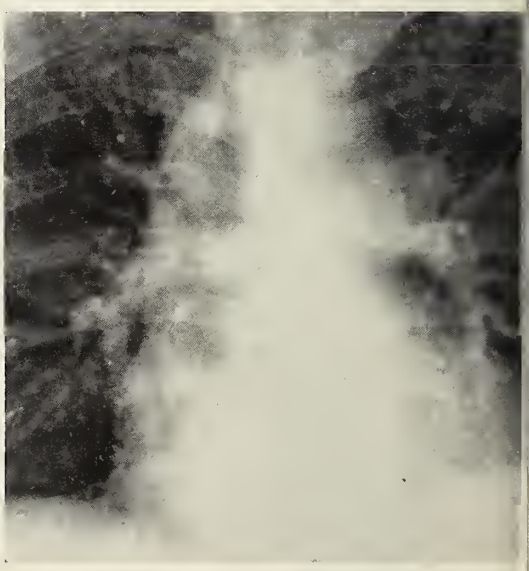


Figure 11

per cent. The overall survival rate is not definitely known as yet.

In the past, our biggest error has been in *watching* tumors month after month, in order to study their growth, rather than diagnosing and operating upon these patients promptly.

REFERENCES

1. Churchill, E. D., Sweet, R. H., Soutter, L., and Scannell, J. G.: Surgical management of carcinoma of the lung; study of cases treated at Massachusetts General Hospital from 1930 to 1950. J. Thoracic Surg., 20:349-358, (Sept.) 1950.
2. Ochsner, A., DeBakey, M. E., Dunlap, C. E., and Richman, I. M.: Primary pulmonary malignancy; factors influencing survival. J. Thoracic Surg., 17:573-599, (Oct.) 1948.

Chronic Alcoholism

A Program of Successful Management

ROBERT C. LARIMER, M.D.

SIOUX CITY

If all be true that I do think,
There are five reasons why men drink.
Good wine; a friend; or being dry;
Or lest we should be, by and by;
Or any other reason why.

—*Henry Aldrich*

As for *not* drinking, there probably is no more than one "reason"—the possibility of getting into trouble from drinking too much. That trouble may be nutritional, such as a polyneuritis, Laennec's cirrhosis, or beri-beri; it may be legal or economic; or it may be any of the various psychiatric and social difficulties loosely grouped under the term *chronic alcoholism.*

Drinking too much is in itself no more a disease than is high blood pressure. Both are signs of underlying disease. High blood pressure may be due to disease of the kidney, of the adrenal glands, of the hypothalamus, or of we know not what. Likewise,[1] people who drink too much may be schizophrenic, seeking to distort the empirical world by means of alcohol; they may be manic, flying from harsh reality in an alcoholic dream; they may be depressed, punishing themselves with hangovers for their imagined guilt; they may be psychopathic, turning to alcohol for lack of other forms of excitement; or they may fall into the class of "essential" alcoholics, most of whom are neurotic, but who often have no more overt traits of psychiatric illness than many normal people have.

Establishing the diagnosis of excessive drinking is somewhat more difficult than making the diagnosis of elevated blood pressure, since there is no sphygmomanometer by which we can judge whether or not drinking is actually excessive. What many members of a fundamentalist church might readily consider constant drunkenness might be regarded as relative sobriety by the personnel of some advertising agencies or by members of the American Legion in convention assembled. Also, as has been noted,[2] the limits of permissable indulgence vary from district to district and from time to time: "South of the Mason and Dixon Line a mint julep, a toddy or a cocktail before meals or between is total abstinence; and a profusion of eggnogs at Christmas is a necessity." Of course there is little question about what characterizes a Skid Row bum, just as there is little question about what ails the patient with uremia and Grade IV changes in the ocular fundi; but differentiating between deterioration due to alcohol and that due to simple schizophrenia is often as difficult, though it is quite as important, as differentiating between pyelonephritis and arteriolar nephrosclerosis. The differentiation, on the basis of one weekend's behavior, between the incipient alcoholic and the high-spirited fraternity boy is as difficult as the differentiation between early "benign" hypertension and "malignant" arteriolitis on the basis of one blood pressure reading.

MOTIVATION IS ESSENTIAL

Assuming, however, that it can be determined altogether satisfactorily that a given individual has been drinking too much, one still has the problem of discovering whether or not he can be treated. It is rare in the practice of internal medicine for one to find a patient who does *not* want to be treated for his hypertension, but one almost never finds an alcoholic who *does* want treatment. Most frequently, the heavy drinker is brought to the doctor by a friend, by a relative or by a policeman, and he is less interested than anyone else in the necessity or desirability of his being given help in what, to his way of thinking, is none of anyone else's business. Desire for treatment, nevertheless, is essential to the successful management of alcoholism, no less than of any other chronic disorder, and that desire must come from within the patient. There is no injectable preparation of it. Motivation can be of many sorts, but more often than not it is simply the patient's disgust with the trouble he has constantly been having. He may turn to his clergyman, to his friends or to his doctor, sincerely look-

ing for help in controlling what he suddenly realizes is an impossible situation.

What can be done, medically, to help the man stop drinking? The simplest, though by far the most difficult, thing for him to do is simply to quit. Perhaps five per cent of alcoholics can do this, but in these days of ubiquitous cocktails (even in "cracker-dry" Iowa), tuneful beer advertising on television and Men of Distinction on the covers of our leading magazines, most of those who try simply to quit fail to do so, thus disappointing both themselves and those who are trying to help them.

Alcoholics Anonymous, though its methods are by no means strictly medical, has probably done more to assist alcoholics to stay sober than has any other group. By offering a "new way of life," and, more directly, by creating social pressures to make the erstwhile heavy drinker not only stay dry himself but to help others stay dry, this group of "dry drunks" has reclaimed, from the social point of view, some 60 per cent of those who have come for help.

Medically, there are several technics that have been used to help people stop drinking. Simple isolation from accustomed surroundings is often quite helpful, for by that means a patient is assisted in escaping from the vicious circle of drinking to rid himself of the emotional and the biochemical effects of his previous night's drinking. Conditioned reflex therapy has been used with many patients, and a remarkable degree of success has been attained with it in some large centers.[3] This is a highly specialized form of treatment, however, and does not readily lend itself to use by the average physician. Treatment with high doses of vitamins, or with adrenal extracts, has been advocated, but few encouraging results have been forthcoming. Many psychiatrists feel that psychotherapy, ranging from group technics to individual (and prolonged) psychoanalysis, is the only way by which permanent cure can be established, and certainly in some cases that is true. But the time and expense involved make this an unwieldy form of treatment, and again one not suitable for the average physician to carry out. In any case, it is often difficult for a patient whose motivation is good, but not perfect, to stay "dry" long enough to participate in, and benefit from, extensive and long-term psychotherapy. Certainly the basic defect in those patients whose excessive drinking is due to manic-depressive psychosis or schizophrenia can be helped only by psychiatric treatment. But even in those cases, there is the problem of keeping the patients sober while treatment is in progress.

ANTABUSE

Since 1948, many thousands of alcoholics both in Europe and in North America have been kept dry for prolonged periods by being put into the "chemical prison" of disulfuram (Antabuse).[4, 5] From the medical standpoint, this is a rational and feasible approach to the problem of excessive drinking. As with digitalis in the treatment of heart failure, disulfuram never cures the basic defect, but it does dependably relieve a disabling sign. As is well known, disulfuram (tetraethylthiuram disulfide, or TETD) specifically inhibits the enzyme (aldehyde oxidase, or xanthine oxidase) which catalyzes the oxidation of acetaldehyde, normally formed by the oxidation of alcohol, to acetate.[6] Acetaldehyde is highly toxic, and blood levels of it on the order of 300 micrograms per 100 cc. produce marked symptoms similar to those produced by a rapid infusion of histamine—flushing, tachycardia, lightheadedness, dyspnea (really a sense of tightness across the chest which may actually represent coronary insufficiency), headache, and a pronounced fall in blood pressure to shock levels due to the profound vasodilatation.[7] During recovery from acetaldehyde poisoning, the patient's signs are similar to those produced by an infusion of epinephrine—pallor, chill, tachycardia, muscular twitching, vertigo and vomiting. Pharmacologically, disulfuram is absorbed almost completely in the usual oral doses, and is excreted through both the liver and kidney, primarily in a hydrolized form (diethylthiuram sulfide). It has a cumulative effect, and about four days are required for a sufficient inhibition of the enzyme in most patients. Thus, Antabuse given simultaneously with liquor results in nothing but intoxication. Similarly, after a patient has been "saturated" with Antabuse, about four days are required for sufficient excretion to occur so that alcohol ingestion will not produce disabling symptoms, and symptoms often may be elicited by a test drink as long as three weeks after the last dose of Antabuse, perhaps because of impaired detoxification and excretion. From the therapeutic standpoint, the occasional tardiness of detoxification is valuable in that the patient can drink safely only if he has foresightedly quit his tablets a week or more in advance.

Many papers from many clinics have outlined many technics for the administration of Antabuse. My preference is for the simplest, and my program[8] is usually as follows: After a patient has sobered up—and the process of sobering may have taken three or four days even with electrolyte replacement and chlorpromazine—an attempt is made to decide whether the drinking is actually abnormal, and if so, roughly what is its cause. The alternative explanations are psychosis, neurosis and psychopathy. Through medical history, physical examination and laboratory studies (including blood count, urinalysis, liver function studies and an electrocardiogram) an attempt is made to find significant organic disease which might alter the treatment program. For example, a patient with coronary insufficiency and angina pectoris should not be subjected to the shock of an Antabuse-alcohol reaction, and a diabetic should be meticulously controlled if he is to be given an inhibitor of

what is, after all, an alternate pathway of carbohydrate oxidation. If it is indicated, Antabuse is then offered, with the understanding that it is the only form of treatment I am equipped to use, and that if the patient decides not to take it, I shall bear him no ill will, but simply cannot help him stop drinking. If, however, he does decide to take Antabuse, I tell him that he must abide by his decision until I, not he, can order its discontinuance. If the patient accepts the program, Antabuse is then given according to the usual dosage of four 0.5 Gm. tablets the first day, three the second, two the third, and one tablet daily thereafter; and arrangements are made for over-night hospitalization in about a week's time.

SUBSEQUENT STEPS

I feel that it is important that the patient be kept out of the hospital, so that he can be in his usual environment as much of the time as possible, particularly when he has just begun this program. Few alcoholics fully realize how completely lacking they are in their ability to control their personal situations, and hospitalization has the effect of removing them from the temptations and difficulties which are present in their usual environment. If the alcoholic is treated as an office or clinic patient, he lives at home, he eats with his usual companions and he is not sheltered from the vicissitudes with which he has formerly failed to cope. His difficulties become more and more apparent to him, and the extent to which he has used alcohol to solve his problems becomes obvious rather quickly. Just as a diabetic must learn to measure his own insulin and cope with his own dietary problems, the alcoholic must learn to take his own Antabuse and confront his own difficulties.

It is also important, as soon as possible, for the doctor to get the patient into active contact with a psychiatrist, if psychotherapy is indicated, and in any case with the local group of Alcoholics Anonymous, both for assistance in working out the problems which he must face and for moral support. Referral to AA, however, is not without its dangers. On occasion, members of the group who have achieved sobriety by other means have viewed Antabuse as a competitive threat, and sometimes have been able to talk candidates into abandoning medical treatment. In these cases, after the Antabuse treatment program has been explained to the membership this has become less of a problem. Indeed, members of AA have often referred other alcoholics for medical help.

After a week, more or less, on Antabuse, the patient is hospitalized overnight for an "experience session," the technic of which has been discussed many times. He then gains the invaluable, albeit rather horrible, experience of drinking while his xanthine oxidase enzyme system is inhibited, and he gets it under medical supervision, rather than in a tavern where the distressing signs of acute acetaldehyde poisoning might be misunderstood and not cared for properly. Also, at this time, certain of the side effects commonly encountered can be treated—drowsiness, skin rashes and the symptoms of anxiety produced by having to face problems without the help of alcohol. A further check for diseases can profitably be made during this brief hospitalization, for some of them —notably schizophrenia and diabetes—can be detected more easily after a period of sobriety and Antabuse treatment. After this session, patients are seen bi-weekly, and later at monthly intervals, so that the physician can both control the therapy and help in the patient's adjustment by means of superficial psychotherapy, sedatives, etc.

In general, provided that circumstances permit, it is a good thing for patients to be kept on Antabuse for at least a year. By the end of that time, most of them will have adjusted fairly well to life without alcohol, particularly if they have made a good adjustment to Alcoholics Anonymous. Since, in alcoholism, relapses are likely to occur on significant dates, such as Christmas, birthdays, wedding anniversaries, income-tax time, and even the anniversary of the first Antabuse tablet, therapy should not be discontinued when an occasion of emotional significance to the patient is imminent, and often patients should be reminded to begin taking tablets again when these dates approach, even after several months away from treatment.

This program of treatment has been used with a few adaptations, in the management of nearly 300 alcoholics in two large university clinics, in several Army posts overseas and in private practice. Allowing for variations in follow-up, results have been similar in all groups—about 80 per cent of all patients who were willing to be treated have made "social" recoveries. By this is meant rehabilitation to acceptable social levels, though not necessarily to complete sobriety—rehabilitation to the extent of being able to hold a job, to restore family unity, or to avoid legal difficulty. By rigorous selection of candidates, one probably could raise that percentage of recoveries. Many of these patients, ones who obviously were never convinced that they were alcoholics, were accepted for treatment at the tearful entreaties of families, or "by order of the commanding officer." However, selection should not be too rigorous. Some of the poor-risk patients actually did surprisingly well, and certainly nobody who asks for treatment, no matter what the circumstances, should be denied it simply because he is likely to spoil the statistics.

Briefly, then, I can summarize by saying that I have presented a philosophy regarding alcoholism, with emphasis on its similarity to more socially acceptable diseases having similarly lifelong natural histories, obscure causes and varying responses to therapy. Disulfuram (Antabuse) is the only treatment so far developed for the distressing sign of pernicious drinking which is suitable for

administration by every physician. But it should be emphasized that this is merely a symptomatic treatment, not a cure. Certain people who drink too much can be cured, if their drinking is a sign of a disease that can be cured. Others can be treated only for the sign. There remain many who cannot be treated at all, either because they will not admit their need for treatment, or—which is saying the same thing differently—because they are unwilling to face life without alcohol.

REFERENCES

1. Dale, P. W., and Ebaugh, F. G.: Personality structure in relation to tetraethylthiuram disulfide (Antabuse) therapy of alcoholism. J.A.M.A., 146:314-319, (May 26) 1951.

2. Osler, William: Aphorisms from His Bedside Teachings and Writings, collected by Robert Bennett Bean, edited by William Bennett Bean. New York, Schuman, 1950.

3. O'Hollaren, P., and Lemere, F.: Conditioned-reflex treatment of chronic alcoholism; results obtained in 2,323 net cases from 3,125 admissions over a period of 10½ years. New England J. Med., 239:331-333, (August 26) 1948.

4. Martensen-Larsen, O.: Treatment of alcoholism with a sensitizing drug. Lancet, 2:1004-1005, (Dec. 25) 1948.

5. Gelbman, F., and Epstein, N. B.: Initial clinical experience with Antabuse. Canad. M.A.J., 60:549-552, (June) 1949.

6. Richert, D. A., and Westerfeld, W. W.: Xanthine oxidases in different species. Proc. Soc. Exp. Biol. & Med., 76:252-254, (Feb.) 1951.

7. Hald, J., Jacobsen, E., and Larsen, V.: Sensitizing effect of tetraethylthiuram disulfide to ethyl alcohol. Acta. Pharmacol., 4:285-296, 1948.

8. Larimer, R. C.: Treatment of alcoholism with Antabuse, J.A.M.A., 150:79-83, (Sept. 13) 1952.

Gastro-Esophageal Hiatal Hernia

Diagnosis and Treatment

ANTHONY H. KELLY, M.D.

SIOUX CITY

GASTRO-ESOPHAGEAL hiatal hernia—protrusion of all or part of the stomach through the esophageal opening of the diaphragm—is the most common defect of the diaphragm found in adults.

At one time, all of these hernias were thought to have been present from birth, but except for a small proportion of the cases seen in children, a congenital origin is not obvious. Onset of symptoms usually occurs during middle life or later. A history of excessive vomiting, recent weight increase or prolonged stomach intubation often precedes the esophageal symptoms, and those premonitory signs can precede positive findings for a long period. Trauma has been blamed, but prolonged increase of intra-abdominal pressure, such as that associated with pregnancy, is more likely. Congenital weakness of supporting ligaments may be a factor.[1, 2]

TYPES

These hernias are usually classified as para-esophageal, sliding gastro-esophageal, and short esophagus, with no easy distinction between the sliding and short esophagus types. Para-esophageal hernias are a minor group, comprising ten per cent or fewer of esophageal hiatal hernias.

The gastro-esophageal junction maintains its normal level below the diaphragm, but a part of the stomach protrudes through the diaphragm at, or just beside, the esophageal hiatus. If the hernia is large, the entire stomach may be in the chest, and is then the familiar "upside-down" stomach, the pylorus being at a higher level than the gastro-esophageal junction.

When the gastro-esophageal junction is no longer held below the diaphragm by the phreno-esophageal ligaments, the stomach is pushed or is pulled by the contracting esophagus and slides up through the hiatus. This is a sliding gastro-esophageal hernia. Since the superior posterior wall of the stomach is partially retro-peritoneal, it maintains this relationship, and a sac is present above the diaphragm only on the anterior surface of the stomach. The function of the diaphragmatic pinchcock is lost, the angle of entry of the esophagus into the stomach is changed and it becomes easy for gastric contents to enter the esophagus. This reflux may occur without evidence of herniation, but is not so likely. The action of the gastric juices on the esophageal lining causes inflammation and may result in a typical peptic ulcer of the esophagus. Repeated episodes of esophagitis cause spasm and fibrosis of the esophagus, and eventually a short esophagus may occur.

Hence, the difficulty in differentiating between the sliding and the short esophagus types of hernias. The distinction is important only if the esophagus is so short that the stomach cannot be replaced below the diaphragm, but that difficulty is rare. There is some evidence that gastric reflux may start this series of events. The esophagus shortens from spasm and inflammation, the phreno-esophageal ligaments stretch, and herniation occurs.[1, 2, 3, 4]

Symptoms of gastro-esophageal hiatus hernias vary, and at first are related more to the amount of esophageal inflammation and spasm than to the size of the hernia. Dysphagia may be the initial

symptom. It is common for epigastric, burning distress to radiate substernally and through to the back on the left. Severe boring or cramping pain may occur in the same areas, and it may radiate to the neck, left shoulder and down the left arm. When palpitations or tachycardia also occur, coronary thrombosis may be suspected. These symptoms may occur after the patient has eaten a heavy meal, and they are most severe when he is horizontal or when he bends over. Frequently, pain awakens the patient at night, and it is not relieved until he assumes an upright position. Attacks may last a few minutes or several hours. There may be long or short intervals between attacks. Belching and easy regurgitation of sour fluid into the throat, due to loss of the gastro-esophageal valve mechanism, causes distress. If the diaphragm pinches the stomach and does not allow food to pass easily from the thoracic portion to the abdominal portion, the patient complains of fullness or pain after swallowing a few bites of food.[1, 5, 6]

Diagnosis of gastro-esophageal hiatal hernia will not be made unless the possibility of it is considered. Physical examination will not be helpful unless a large hernia is present. The history is an all-important means of focusing attention on the area. Fluoroscopic examination during a barium meal will be of greatest aid.



The diaphragm, stomach and esophagus have been outlined to make the portion of the stomach above the diaphragm stand out. The patient was lying on his abdomen and was tilted 40 degrees in the headdown position when this picture was taken. This position caused recurrence of his pain, though it had subsided during hospital treatment.

The roentgenologist should be informed of the possibility of a diaphragmatic hernia so that he will place the patient in a head-down position and make use of maneuvers designed to increase intra-abdominal pressure. The stomach will slide up through the hiatus and will be seen above the diaphragm, and reflux up the esophagus will also occur. A dilated lower esophagus must be distinguished from displaced stomach, usually by gastric rugal markings. Simple reflux of barium up the esophagus may occur without herniation of the stomach, but it is more easily distinguished because of the typical esophageal pattern.

Endoscopic examination of the esophagus is important as a means of substantiating the x-ray diagnosis and of judging the amount of inflammation of the esophagus. Other pathologic conditions of the esophagus, such as ulceration, stricture, shortening and cancer, may be associated with the herniation. Carcinoma of the lower esophagus seems to occur more frequently in people with hiatus hernia than in the general population, but the relationship is not clear.[1, 2, 5, 6, 7, 10]

Previous diagnoses of disease in other upper abdominal or lower thoracic organs is a routine rather than a rare occurrence. Frequently more than one diagnosis has been entertained. These, in order of frequency, are: chronic cholecystitis or cholelithiasis, gastric ulcer, duodenal ulcer, secondary anemia, heart disease, carcinoma of the stomach or cardia, stricture of the esophagus and intestinal obstruction.

Treatment of gastro-esophageal hiatal hernia depends on multiple factors. Patients may be divided into three general groups: those requiring no treatment, those adequately managed by medical technics and those best treated surgically. If the patient is without symptoms and is not bleeding internally, and if there is no esophageal pathology, simple observation may be sufficient. Hiatus hernias are not often diagnosed in such patients.

MEDICAL MANAGEMENT

Medical treatment should be reserved for those patients with small gastro-esophageal hernias without complications and without increasing herniation. In other cases, shortening of the esophagus may make surgical treatment impossible and limit therapy to dilatations and medical management.

The aims of medical treatment are to prevent esophageal reflux of gastric contents and to decrease the peptic ulcerative powers of the gastric contents that do gain entry into the esophagus. Retrograde flow up the gullet can be decreased by several measures. Elevating the head of his bed will help the patient to avoid the horizontal position at night. By discontinuing the wearing of tight garments and through avoidance of frequent bending, stooping and straining he can spare himself increases in intra-abdominal pressure. He should get rid of excess weight by dieting.

To decrease the digestive powers of gastric contents, the treatment used for peptic ulcerations is suitable. Bland, mechanically soft diet, frequent feedings, anti-spasmodics and antacids are advisable.[1, 5]

This medical management should include adequate follow-up as a means of determining results. Symptoms should be relieved, and the herniation should not increase in size. The esophagus may suffer irreparable damage if symptoms are not relieved, or serious complications may ensue. If the hernia is increasing in size, it is only a matter of time until hemorrhage, incarceration, peptic ulceration or obstruction occurs. The longer that patients with hiatus hernias are observed, the more frequently are complications and increase in size noted.[8]

If over one-third of the stomach is above the diaphragm, medical treatment is unsatisfactory. Symptoms are not controlled and complications often occur. Esophagitis, stricture and shortening of the esophagus are more common with large hernias.

SURGICAL TREATMENT

Because surgery is not difficult and has a low mortality, it should be considered for all patients who do not respond to medical care. Surgery is necessary when one-third or more of the stomach is involved, or when the small or large bowel is included in the hernia.

Gastro-esophageal hiatal hernia may be repaired through an abdominal, a lower left thoracic or a combined incision. Each has advantages. Access through a low left lateral thoracotomy is direct, exposure is good and viscera do not slide constantly into the operative field. An anatomically better repair is possible. If other disease of the upper abdominal organs is suspected or known, exploration and treatment of this disease through the diaphragm is difficult or impossible; then an abdominal approach is more sensible.[1, 6]

If the patient is unable to withstand surgery of this magnitude, left phrenic nerve interruption may relieve his symptoms by relaxing diaphragmatic pressure on his stomach.[1]

The thoracic incision is through the bed of the resected left eighth rib. The herniated stomach may be seen bulging in the posterior mediastinum. The mediastinal pleura is opened, and the lower end of the esophagus and the upper stomach are dissected free. Dissection of the sac and reduction of the herniated stomach are facilitated if one makes a counter-incision through the tendinous dome of the diaphragm and works from both sides of the diaphragm.

After reduction, the phreno-esophageal ligaments are fastened to the abdominal surface of the diaphragm. The hiatus is then closed about the esophagus by approximating the muscular crura behind the esophagus. At times, one may have difficulty in finding adequate tissue, especially to the left of the esophagus, to effect this closure.[6, 9]

Repair of these hernias from below necessitates a left rectus incision and freeing and retraction of the spleen and left lobe of the liver. The dissection and reduction of the stomach must be done, but the exposure takes more hands, and is not easy. A side-to-side closure of the hiatus is undertaken because the area behind the stomach and esophagus is difficult to expose. At times, the hiatus may be enlarged in a lateral direction, rather than in an anterior posterior direction. The closure from above more nearly restores the anatomy to normal, but by either method, reflux is prevented and recurrence is infrequent if the repair has been adequate. If proper attention has been paid to details, the operative mortality and morbidity are low, and recurrence is less likely than it is after inguinal herniorrhaphy.[1]

SUMMARY

Gastro-esophageal hiatal hernia is common. Belching, regurgitation of gastric contents, dysphagia, pain in the epigastrium which occurs after overeating, bending, stooping or lying in bed, which radiates substernally and to the left side of the back and which is relieved by the upright position plus the ingestion of milk or alkalies—any or all of these are symptoms that should lead the physician to suspect hiatus hernia as well as the commonly diagnosed peptic ulcer, chronic cholecystitis and myocardial pain. Diagnosis is confirmed by fluoroscopic visualization of reflux of barium into the herniated pouch of stomach, and esophagoscopic examination which reveals gastric mucosa above the diaphragm.

Medical treatment that often relieves symptoms includes (1) the prevention of situations which increase intra-abdominal pressure and thus cause reflux, and (2) the reduction of the acid peptic power of the gastric contents.

The anatomical defect can be repaired only by surgery, and it *should* be repaired (1) if a large hernia or a severe esophagitis is present, (2) if hemorrhage has taken place, (3) if displacement increases or (4) if symptoms have not been relieved by medical management.

Surgical therapy consists of reduction of the herniated stomach and prevention of recurrence by fastening the stomach below the diaphragm and narrowing the esophageal hiatus.

BIBLIOGRAPHY

1. Harrington, S. W.: Various types of diaphragmatic hernia treated surgically; report of 430 cases. Surg. Gynec. & Obst., 36:735-755, (June) 1948.

2. Olsen, A. M., and Harrington, S. W.: Esophageal hiatal hernias of the short esophagus type: etiologic and therapeutic considerations. J. Thoracic Surg., 17:189-209, (Apr.) 1948.

3. Sweet, R. H.: Esophageal hiatus hernia of the diaphragm: anatomy, characteristics, technique of repair and results of treatment in 111 consecutive cases. Ann. Surg., 135:1-13, (Jan.) 1952.

4. Sweet, R. H.: Thoracic Surgery. Philadelphia, W. B. Saunders & Co., 1954.
5. Clerf, L. H., Shallow, T. A., Putney, F. J., and Fry, K. E.: Esophageal hiatal hernia. J.A.M.A., 143:169-172, (May 13) 1950.
6. Allison, P. R.: Reflux esophagitis, sliding hiatal hernia and the anatomy of repair. Surg. Gynec. & Obst., 92:419-431, (Apr.) 1951.
7. Sweet, R. H., Robbins, L. L., Gephart, T., and Wilkins, E. W., Jr.: Surgical treatment of peptic ulceration and stricture of the lower esophagus. Ann. Surg., 139:258-268, (Mar.) 1954.
8. Sprafka, J. L., Azad, M., and Baronofsky, I. D.: Fate of esophageal hiatus hernia: clinical and experimental study. Surgery, 36:519-524, (Sept.) 1954.
9. Lam, C. R., and Kenney, L. J.: Problem of hiatus hernia of the diaphragm. J. Thoracic Surg., 27:1-9, (Jan.) 1954.
10. Smithers, D. W.: Short esophagus and its association with peptic ulceration and cancer. Brit. J. Radiol., 18:199-209, (Jul.) 1945.

Fundamental Errors in Anesthesia

STUART C. CULLEN, M.D.

IOWA CITY

Many morbidities and mortalities associated with anesthesia can be assigned to relatively few fundamental errors. These include (1) mistakes in selection of agent and technic, (2) inadequate attention to the airway, (3) inadequate attention to ventilation, (4) ineptitude or indifference in administration, and (5) deficiencies in postanesthetic care.

Selection of Agent and Technic

It should be made clear at the outset of any discussion of this aspect of the problem that as important as choice of agent and technic is, it is of relatively little importance compared to the proficiency of the anesthetist. As a result, the selection of an anesthetic drug or method is contingent not only upon the factors to be outlined later, but also upon the familiarity of the anesthetist with the drug and method. In other words, although a particular agent and technic may be less than ideal on the basis of the factors to be presented, more safety to the patient and greater satisfaction to the surgeon can be achieved by those means if the anesthetist is most adept with that particular solution to the problem.

There are three fundamental factors to be considered in the selection of an anesthetic agent or technic: (1) safety to the patient, (2) convenience to the surgeon, and (3) comfort to the patient. These are listed here in the order of their importance, and if sacrifices are necessary, they must be at the expense of the second or third of the desiderata. Only rarely must safety be sacrificed for the convenience of the surgeon or for the patient's comfort.

Safety to the Patient. In a consideration of safety to the patient, one should be concerned not only with the time during which the patient is anesthetized but also with the effect of the agent or technic on his postoperative period. The anesthetist should realize that he is concerned not only with getting the patient out of the operating room alive but also with getting him out of the hospital as quickly and in as good condition as possible. His choice of agent and technic, therefore, should be farsighted, and not confined to the anesthetic period alone.

Convenience to the Surgeon. A satisfactory solution of anesthetic problems for both the surgeon and the anesthetist can be obtained if the surgeon will make known his requirements. The anesthetist is obligated to satisfy the surgeon's requirements, within the limits of safety to the patient. He must be apprised of those requirements, however, not in terms of what agent and technic to use, but rather in terms of the relaxation desired, the length of the operation, the presence or absence of cautery or other electrical equipment, the surgeon's and the patient's personal preferences, etc. There are many agents and technics available in modern anesthesiology, and it usually is quite possible to satisfy the surgical requirements without jeopardizing the patient's safety. The anesthetist must realize that the patient came to the surgeon to get well, and he must make it as convenient as possible for the surgeon to complete the necessary work. There is little to be gained if the anesthesia is so unsatisfactory that the surgery cannot be completed in the proper fashion. The surgeon must realize that the anesthetist is interested in securing optimal conditions for him, and that those conditions can be achieved only if the anesthetist is told specifically what they should be. Cooperation between anesthetist and surgeon is mandatory to the success of the operation and to the restoration of normal function in the patient.

Comfort for the Patient. Comfort is the factor in which the patient is primarily interested. And by *comfort* he usually means a pleasant, rapid induction and a recovery period devoid of gastric and intestinal distress. Fortunately, it is often possible to promise the patient these small measures of comfort. It is most unwise, however, to accede to demands for comfort when rapid induction or the use of an agent or technic which causes minimal gastric and intestinal distress would prove unsafe. Also, it is unwise to use an agent and technic throughout an anesthesia merely because it produces a rapid, pleasant induction when the con-

Dr. Cullen is head of the Division of Anesthesiology in the Department of Surgery at the S.U.I. College of Medicine.

tinued use of that agent and technic is unsatisfactory from other standpoints. This is particularly true of the tendency to utilize Pentothal as a principal agent throughout an anesthetic procedure. Comfort for the patient should, if necessary, be readily sacrificed in favor of convenience to the surgeon and, especially, safety to the patient.

The selection of anesthetic agent and technic should be individualized on the basis of (1) the patient's physical state (of which the anesthetist should be thoroughly aware), (2) surgical requirements, and (3) the desires of the patient. It is essential that the anesthetist have a working knowledge of the pertinent pharmacologic and physical properties of the agents and of the limitations of the technics. The anesthetist should select a suitable agent and technic by answering the following three questions:

1. What are the safest agent and technic for this patient for this operation?
2. What are the surgical requirements?
3. How can I make the patient most comfortable?

AIRWAY

No other single factor in an anesthetic procedure is so essential to a safe and satisfactory anesthesia as the establishment and maintenance of a perfect airway. The airway is also a prerequisite for beneficial resuscitative measures. Strange and inconsequential as it may seem, an unobstructed airway must be secured and preserved in topical, infiltration, block and spinal anesthetic technics, just as in technics producing narcosis.

It is an interesting, albeit an alarming, paradox that although under ordinary circumstances individuals are given police protection for the maintenance of their airway (i.e., death by strangulation is murder), many persons are subjected to strangulation under the guise of anesthesia in hospital operating rooms and in delivery rooms. Conservatively, we can estimate that 90 per cent of the deaths occurring in patients under anesthesia are due to improper management of the airway. It is also true that a high percentage of patients suffering from drug depression, diabetic coma, alcoholic stupor, head injuries and stroke do not die directly from the drug, injury or disease, but rather from the asphyxia that is associated with an obstructed airway.

No anesthesia is safe or satisfactory unless diligent efforts are made toward the maintenance of a functioning airway. There is no anesthetic agent or technic that guarantees a good airway. There are no short cuts by which one can avoid giving constant attention to its patency. Any attempts to supplant close supervision of the airway by mechanical contrivances and any neglect of the airway will soon be reflected in increased anesthetic morbidity and mortality. Deaths from inadequate control of the airway are inexcusable and avoidable. It is most difficult to kill a patient with anesthesia if the airway is patent and ventilation is maintained.

Effects of Inadequate Airway. A free airway can be defined as one through which the inspired atmosphere passes, without obstruction, from outside the body into arterial blood, and through which waste gases can pass, without obstruction, from venous blood to external atmosphere. The airway includes the naso- and oropharynx, the larynx, the trachea, the bronchi and all the subdivisions, and the alveoli. It is evident that opportunities for interference with the patency of the airway are numerous and that an awareness of the possibilities for trouble is essential to a complete appreciation of the problems involved.

An obstructed airway causes several undesirable effects: (1) it calls for increased effort by the patient, (2) it causes difficulty for the anesthetist in his efforts to maintain sufficient and even anesthesia, and (3) it seriously interferes with oxygen supply and carbon dioxide elimination.

Physiologic economy is geared to the constant intake of oxygen and elimination of carbon dioxide. Any interference with this process results in an attempt by the body to reestablish normal supply and removal of these gases. Obstruction of the airway makes increased demands on the muscles of respiration by making the movement of a mass of air more difficult. The additional effort required to move air past an obstruction tires the patient, makes him less capable of tolerating the surgical procedure and facilitates the development of shock.

Pulmonary edema may be a consequence of an imperfect airway. The differential between intrapulmonic and ambient pressure is increased in an attempt to move air past an obstruction, and this relative decrease in intrapulmonic pressure predisposes to transudation of fluid into the alveoli.

It is particularly true of anesthesia secured by the inhalation of volatile or gaseous agents that the anesthetic state cannot be obtained unless the agent reaches the blood stream in sufficient quantity and concentration to effect the desired depression. The anesthetic state cannot be maintained if it is impossible for one to preserve the blood level of the agent, and excessive blood concentrations of the agent are difficult to avoid if elimination of the agent is blocked. Many patients have died because an imperfect airway did not permit the elimination of high concentrations of the anesthetic agent. Many prolonged inductions of anesthesia with accompanying awe-inspiring excitement are due to airway obstruction resulting in slow development of adequate blood levels. Many patients who are alternately coughing in light anesthesia and then not breathing in excessively deep anesthesia are alternately deprived of a decent airway and provided with a good one. The classic example of uneven anesthesia is inhalation anesthesia with a poor airway in the patient undergoing tonsillectomy.

Muscular relaxation is not easily accomplished

in the patient with an obstructed airway. Operating conditions in the abdomen are particularly unsatisfactory, for the rectus muscles are tense, and the abdominal contents are heaving from excessive diaphragmatic action. These discommodious working conditions are often mistakenly attributed to insufficient depth of anesthesia. Frantic attempts to improve the state by increasing the concentration of the agent serve only to aggravate the difficulty, and too frequently, they cause death. Countless patients have lost their lives because of the unfortunate response of inept anesthetists to the surgeons' imperious plea, "Get him deeper! Get him deeper!" when the real trouble was an obstructed airway.

It was mentioned earlier that the body physiology is adjusted to an uninterrupted supply of oxygen and an uninterrupted means of eliminating carbon dioxide. No provision is made for storage of oxygen. Since there can be no oxygen reserve, it is imperative that the airway be preserved at all times. The patient may tolerate the increased effort necessitated by the imperfect airway, and he may not suffer too greatly from an uneven and inadequate anesthesia, but he will die if the airway obstruction is great enough or prolonged enough to impede his oxygen supply and carbon dioxide removal. An unobstructed airway is an integral part of satisfactory ventilation.

VENTILATION

As important as the establishment and maintenance of an adequate airway in the conduct of safe and satisfactory anesthesia is the establishment and maintenance of adequate ventilation. It is important that the anesthetist make an accurate estimate of normal ventilation for the individual patient under his care, that he be alert to the effects of inadequate ventilation, that he be familiar with the factors predisposing to hypoventilation and that he take steps to correct deficiencies in ventilation when they occur.

Ventilation can be defined as the movement of the respired gases into and out of the lungs. There are three factors pertinent to the movement of the respired gases: (1) the pressure differential between the ambient atmosphere and the intrapulmonary atmosphere, (2) the volume of the respired gases, and (3) the time during which the respired gases are moved. A distinction is made between ventilation and respiration. Ventilation is concerned with the movement of gas to and from the point at which the gases can be respired or exchanged between alveoli and blood.

The anesthetist is intimately concerned with ventilation because it is essential to the patient's welfare that exchange is permitted to take place. And in the circumstances of inhalation anesthesia, it is essential to the development of safe and satisfactory anesthesia that one should provide for movement of the anesthetic gases and vapors to and from the point at which exchange takes place between the alveolar atmosphere and the blood.

Ventilation Measurement. It is imperative that the anesthetist make constant evaluations and reevaluations of the extent of ventilation. In the absence of simple, practical, noncumbersome and inexpensive apparatus that can be applied to every patient during anesthesia, it becomes necessary for the anesthetist to "educate" his eye, hand and ear. This education is accomplished by repeated observation of the movements of the patient's thoracic cage and abdomen, and of the rebreathing bag. The anesthetist must also learn to estimate ventilation from the "feel" of the thoracic cage and the rebreathing bag. Finally, he must learn to detect the pressure, volume and time relationships by listening to the movement of the respired atmosphere.

Most anesthetic records contain space for recordings of the rate of respiration, and many anesthetists routinely indicate ventilatory activity by jotting down the rate of respiration. At best, the rate of respiration alone gives only an obtuse estimate of the extent of ventilation. It would be far more enlightening, from a record standpoint, for the anesthetist to note tidal and minute volume exchange.

The anesthetist ordinarily underestimates the extent of ventilation. In a number of observations with the mass spectrometer (dynamic carbon dioxide analysis) tremendous retention of carbon dioxide from hypoventilation was demonstrated in patients to whom the anesthetist felt he was providing adequate ventilation.

Effects of Hypoventilation. Hypoventilation is that state in which—because of alterations in pressure differentials, volume of gas moved or changes in the time during which gas is moved—there is an insufficiency in the exchange of gas between ambient atmosphere and blood. In other words, ventilatory insufficiency (hypoventilation) results in respiratory insufficiency.

Hypoventilation interferes with the transport of oxygen, carbon dioxide and anesthetic gases and vapors. As a result, the signs of hypoventilation are those of hypoxia, hypercarbia and inadequate or excessive anesthesia.

Inadequate anesthesia is the result of inability to transport anesthetic agents *to* the blood; excessive anesthesia is the result of inability to remove anesthetic agents *from* the blood. Excessive anesthesia also may be due in part to the depressant action of carbon dioxide.

It is especially important for one to remember that hypoxia can be compensated for if one increases the tension of oxygen in the respired atmosphere. But hypoventilation still may exist. Too many anesthetists for too long have been satisfied with having the patient "pink." One should not be lulled into complacency about the patient's ventilatory sufficiency on the basis of oxygen supply alone. In most patients with hypoventilation,

it is physiologically preferable for one to correct the oxygen deficit by providing adequate ventilation, rather than to increase the oxygen tension in the respired atmosphere. One should remember at all times that the patient can be in a state of severe hypoventilation without showing clinically detectable signs of hypoxia.

The recognition of carbon dioxide retention is especially difficult in the presence of depressant drugs and anesthetics. In part, this may be due to the fact that carbon dioxide acts in many ways as an anesthetic agent. It stimulates in low concentrations and depresses in higher concentrations. The development of its effects is often insidious. Moreover, its influence merges so imperceptibly with the effects of depressants and anesthetic drugs that pronounced untoward reactions are often misinterpreted. The anesthetist therefore must ever be aware of the possibility of carbon dioxide retention as a cause for undesirable responses that puzzle him, and he must take suitable steps to eliminate the possibility.

Elevation of the blood pressure and acceleration of the pulse rate are associated with hypercarbia. It should be emphasized, however, that these changes usually appear early in the development of that condition. They also may be masked entirely by the concomitant use of depressant and anesthetic drugs. Moreover, when the hypercarbia reaches higher levels, there may be a depression of blood pressure and pulse rate. The absence of elevation of blood pressure and acceleration of pulse rate does not guarantee the absence of carbon dioxide retention.

Hypercarbia in the presence of hypoventilation may seem paradoxical because of the common concept that an elevated carbon dioxide level always results in hyperventilation. But, as was pointed out earlier, carbon dioxide may act as a depressant and in states of hypoventilation induced by anesthetic drugs or other factors to be outlined later, carbon dioxide may accumulate without evident increase in ventilation and may contribute to the state of hypoventilation. In the absence of critical evaluation of the situation, some may be tempted to add carbon dioxide to the respired atmosphere in states of hypoventilation. No excuse can be offered for such a measure, no benefit can be derived from it, and it offers an opportunity for augmenting damage.

Muscular rigidity is not uncommon with carbon dioxide retention. During anesthesia, this lack of relaxation may be ascribed erroneously to insufficient depth of anesthesia. Through such misinterpretation, the patient is often subjected to increased concentrations of anesthetic agent, increased hypoventilation and accentuation of the carbon dioxide retention which has been the cause of the lack of relaxation. Muscular relaxation in these circumstances is secured only at the expense of profound circulatory and respiratory depression —the result of combined anesthetic and hypercarbic depression. The anesthetist must be constantly alert to the possibility that carbon dioxide retention is a cause of insufficient muscular relaxation. Efforts should be directed toward improving ventilation and eliminating the carbon dioxide before additional drug depression is administered.

The increased muscular activity may progress to the point of twitchings and convulsions. Carbon dioxide is an important element in the production of convulsions during anesthesia. Hypercarbia may precipitate convulsions under any type of anesthesia. This stimulant effect of carbon dioxide may, however, be masked by relaxants and depressant drugs. Moreover, high concentrations of carbon dioxide may depress rather than stimulate.

Dilated pupils often may be observed with hypercarbia. Excessive perspiration may appear during states of carbon dioxide retention. Obviously, the acid-base balance of the blood is deranged by carbon dioxide retention, and the effects of acidosis are manifold and sometimes obscure.

It is worth repeating that the signs of carbon dioxide retention associated with hypoventilation are difficult to detect. Changes in the circulation may not be evident; changes in respiration may be those of depression; muscular rigidity may be masked by relaxants; twitchings and convulsions may be masked by depressants and relaxants; and pupillary and other signs may often be absent. Hypoventilation and hypercarbia always may be suspected, and constant efforts should be made to prevent and correct these undesirable states.

INEPTITUDE AND INDIFFERENCE IN ADMINISTRATION

Ineptitude of the anesthetist is an easily identifiable cause of difficulty in anesthesia. One can expect morbidity and mortality associated with the employment of unsupervised, inexperienced personnel for the administration of anesthesia. This is a remediable situation and is no excuse for poor anesthesia.

Indifference to the management of anesthesia, however, is a somewhat different problem. Inattention and carelessness are faults of which both the qualified anesthesiologist and the trained technician are capable. These faults account for an appreciable share of the preventable morbidity and mortality related to anesthesia. The anesthetic state is a dynamic one in which profound changes in the patient's condition can take place within seconds. Anesthesia is produced by drugs which can be classified easily as highly toxic poisons. These considerations make it imperative that observation of the patient's responses during anesthesia be constant and critical. Many patients can tolerate the abuses of anesthesia; many patients can tolerate the abuses of poor obstetrics or surgery; but too many die as a consequence of lack of close attention by one or more members of the team.

Too many times, each of us has heard, "The patient was all right just a few minutes ago, and all of a sudden he died." Sudden, unexplainable death

under anesthesia does occur. On the other hand, it is easy in too many cases to determine that there were premonitory signs that were overlooked or ignored. One can easily accumulate evidence to indicate that many of the "sudden, unexplainable" deaths under anesthesia were in reality neither sudden nor unexplainable; rather, the anesthetist was careless, inattentive or indifferent. There is no substitute for constant vigilance as regards, among other things, continual observation of pulse, blood pressure, color and respiratory exchange.

DEFICIENCIES IN POSTANESTHETIC CARE

The immediate postanesthetic period is a critical one for the patient. At that time, adjustments are made to a different inhaled atmosphere, to a different position, to a change in the degree of ventilation, to changes in vital areas affected by drugs and to alterations in hemodynamics. Anesthetists have a tendency to consider that patients are no longer their responsibility when they have left the operating or delivery room. It must not be overlooked that the patient cannot eliminate the effect of an anesthetic in a matter of minutes or seconds, and close observation by qualified personnel in the postanesthetic period is mandatory. Personnel trained by anesthetist and surgeon to recognize difficulties in this critical period are essential, and the success of recovery rooms is in large measure due to this factor.

SUMMARY

Some of the common factors involved in anesthetic morbidity and mortality have been outlined. Close attention to these fundamental factors cannot help diminishing the hazards associated with anesthesia.

The General Practice of Otolaryngology

ORAL L. THORBURN, M.D.

AMES

Otolaryngology, as a specialty, has changed remarkably in the past few years, but it is far from dead. The special training needed if one is to cope with the problems of diagnosis and management in this field is just as considerable as it ever was. It is true that the emphasis has been shifted. Formerly, mechanics and technics were all important. The otolaryngologist was occupied largely with the drainage of overwhelming infections of sinuses, mastoids and cervical abscesses, and with the production of mechanically satisfactory airways. Thus, his practice was somewhat divorced from general medicine. One significant exception was occasioned by the concept of focal infection—the idea held by the medical profession generally that many of the ills of mankind could be eliminated by wholesale tonsillectomies and radical sinus surgery. With more complete understanding of the physiology of this area and of the body as a whole, and with better means of controlling severe infections, all this has been changed. Our standards of normalcy are higher. We are no longer content with treating the local situation alone, but insist on relating it to the organism as a whole. What used to be fairly simple diagnostic problems are now very complex ones, which require not only the viewpoint of the otolaryngologist but his close cooperation with the internist and with other specialists. No, otolaryngology isn't dead. As Hilger declared in his Wherry Memorial Lecture in 1951, "The otolaryngologist has become more a doctor and less a narrow and isolated specialist."

SURGERY SHOULD BE A SEPARATE FIELD

What do I mean by the "general practice of otolaryngology?" I mean everything involved in making a proper diagnosis, including special and general history, minute and thorough examination with the accessory laboratory aids, x-ray and pathologic reports when called for, plus every medical and surgical means of treatment, except (and this is the crux of the matter) the very special technics in which proficiency can be achieved and maintained only through unusual training and constant practice. Among these latter—the procedures which, it seems to me, the general otolaryngologist shouldn't include in his practice—I should list endoscopy, rhinoplasty, laryngectomy and block dissection for malignancy, fenestration and hare-lip and cleft-palate surgery. The percentage of patients in otolaryngological practice requiring these special procedures is not high. If one devotes much of his time to any of them, he must necessarily neglect the ordinary run of E.N.T. practice. The result is poor management of those patients by doctors insufficiently trained in this field. The ordinary chores of otolaryngology, the general practice, is sufficient to occupy the full time and energy of the doctor and is enough to challenge his best efforts.

In emphasizing the general practice of otolaryngology, I am not minimizing the importance of these special procedures. They are important—so important in fact that doing them well takes much skill and experience. And for patients requiring

special services, attention from a specially trained otolaryngologist is imperative. The point is simply this: that a doctor who devotes enough of his time to these procedures so that he can maintain his proficiency and contribute original ideas and technics cannot possibly have enough time and energy left for the patients who comprise the bulk of an E.N.T. practice. In addition, there is the problem of availability. If E.N.T. practice, excluding the special procedures, comprises about 90 per cent of the cases, it stands to reason that in large areas this service will not be readily available unless more otolaryngologists are trained, unless they are more widely distributed than at present and unless they are willing to care for this bulk of the practice. It is my contention that because the general practice of otolaryngology yields too small a proportion of patients needing the special surgical technics for any one man to be proficient in them all, each of us must choose which type of practice he prefers and locate himself accordingly.

MUCH REMAINS FOR THE OTOLARYNGOLOGIST

Otolaryngology is one field of medicine which requires special analysis of the patient's history and, above all, good visability of the parts examined so that a proper diagnosis can be made. It is fine to listen to the patient's complaints, but when, for example, he says at the outset little more than that he has "sinus," he must then provide answers to many well-put questions if the doctor is to have any differentiation data. "Dizziness" is another complaint that requires analysis. It is very easy to condemn the ears without good reason. Focal illumination and the technics of its use are probably more important here than in any other field, except perhaps ophthalmology. Inspection is the chief method of examination, and without good lighting, often combined with magnification, the examination is worthless. What real information can one get by looking into a throat with a goose neck lamp or a flashlight, in a well lighted room designed for general examination? Or how can one examine a larynx by such methods? How much detailed information can one get by looking up a nose with a flashlight? Besides, how is one to distinguish normal from abnormal, unless one has had training and experience in examining many noses by proper methods? An electric otoscope is fine for examining an ear drum, but what if the canal is filled with cerumen, pus or other debris? What good is an otoscope then? Is it safe, first, to turn the patient over to the nurse for irrigation of the ear because it takes too much of the doctor's time? I'm sure no doctor would care to have his own ears, nose and throat examined by these crude methods. Yet, there has been much talk in recent years that the otolaryngologist is unnecessary, or that he must extend his field in order to keep his specialty vigorous and alive. I'm sure patients still appreciate proper handling and recognize competence far more often than is realized.

What are some of the common run-of-the-mill medical problems in the realm of the otolaryngologist? There are many, but a few will illustrate the widespread need for his special service. Deafness of all kinds is an everyday challenge. It is true that little is definitely known about the etiology of acoustic nerve deafness, but more and more will be learned about its prevention and treatment. In this era of chemo- and antibiotic therapy, much conduction deafness could be prevented by better follow-up of acute otitis media to make sure that it is completely eliminated. This is especially true in children. When the child ceases to complain of pain, the physician who lacks special training in this field too often assumes that all is well, when in reality fluid is retained in the tympanic cavity, and permanent adhesive changes may result. Who is better fitted than the otolaryngologist to follow these cases to proper resolution? When tonsillectomy and adenoidectomy are indicated for the relief of recurrent otitis, the work should be done thoroughly. A complete adenoidectomy, with visualization of the entire naso-pharynx, is no minor procedure and requires special training and skill. An incomplete adenoidectomy may be only temporarily effective. Vasomotor rhinitis is another frequent problem. The otolaryngologist may need help to solve it, for it is no more than a local manifestation of a general disease, but he is in the best position to follow the patient through to partial relief or recovery. The many patients with cervical, occipital, facial and aural pains are a special diagnostic problem. Very often these patients present completely negative E.N.T. findings, but who, except the otolaryngologist, can know for certain that they are completely negative? Psychosomatic influences come into play here. The concept of autonomic dysfunction offers hope for these patients, and the otolaryngologist is in the best position to recognize and evaluate this disturbance in physiology.

If we accept the view that the great bulk of otolaryngologic patients really need the care of specially trained personnel and that the skill involved need not include special surgical technics, what about the economics of the situation? Excluding the relatively high fees for such surgery, will the income be sufficient? I believe it will. The number of patients seen will be relatively higher, and there will be time for the otolaryngologist to give them the attention they need for proper diagnosis and treatment. Cooperation between him and other specialists in the problem of diagnosis will further increase his load of patients. If located in a small center, a modified eye practice can be combined with the E.N.T. work, as it has been in the past, and believe me, the patients will appreciate it. In addition to adequate economic returns, such work will give men great personal satisfaction, for it constitutes a service that no one else can render so well to so many patients.

SUMMARY

Many of the surgical technics in otolaryngology have become so specialized that they demand unique training and constant practice for proficiency. They require so much of the individual's time that he has little left for the care of the high percentage of patients who comprise an otolaryngologic practice. The general practice of otolaryngology, excluding this special surgery, offers better care for the patients and offers diagnostic challenge, economic reward and personal satisfaction to any well trained otolaryngologist.

Live Virus Rabies Vaccine

One should . . . vaccinate as many dogs as possible so as to impose a barrier of immune dogs between infected wildlife and man. Experience has shown that if 70 per cent of the dog population is vaccinated, rabies can be controlled.

Two effective vaccines are available. One contains killed virus produced in mammalian brain tissue; it will afford protection for 1 year. The other, the Flury strain of modified live virus rabies vaccine, produced in embryonated hen's eggs, protects for 4 years, and possibly for life. We have had extensive field experience since 1946 with both types of vaccine.

In upper New York State, where wildlife rabies is endemic in approximately one-third of the area, and where 314 to 1,175 laboratory-confirmed cases have been reported annually since 1944, canine rabies has been dramatically controlled since the dog program was initiated early in 1946. We had 233 rabid dogs in 1944, 503 in 1945, and 377 in 1946, the year our program started. Since then we have had only 16 to 48 annually, despite the widespread and continuing wildlife infection.

The modified live virus vaccine was first used in two of our counties in 1950. Its use grew steadily. It has been the only vaccine used in all county vaccination programs since 1952. . . . There have been only 2 vaccination failures and 1 vaccine death among the 200,000 dogs that have been given the chick embryo product.

It is more effective and cheaper to vaccinate individual dogs every 4 years. Successful animal vaccination is difficult to achieve, particularly in areas where rabies does not exist or where infection is minimal. . . . Another advantage of a modified live virus vaccine is that it appears to be safer for injected dogs. Most of us have witnessed untoward neurological side reactions in occasional animals given the killed virus vaccine.

—Donald J. Dean, DVM., veterinary consultant, New York State Department of Health, in PUBLIC HEALTH REPORTS, 70:565-566, (June) 1955.

At Tulane University, we have been trying the live Flury virus vaccine in prisoner volunteers to see if it can be used to replace current forms of the Pasteur treatment. . . . All of our work has been with high-passage virus, about 180th passage level, although 3 or 4 years previously Dr. Koprowski (Hilary Koprowski, Ph.D., director of viral and rickettsial research, American Cyanamid Company) used the low-passage virus, now used for dogs, in about 30 persons. In all, we have given one or more inoculations of this virus to about 170 or 180 persons, and one important fact is that we have observed no adverse effects.

The more important point, however, is that, although we know the Flury vaccine works well in dogs, we are still trying to find out if it does in man. A single injection of two dog doses does not indue a detectable neutralizing antibody. Increasing the amount of virus inoculated by giving multiple doses often, and in proportions increasing with the amount, gives rise to antibody. Thus, we feel that the Flury virus probably does not multiply in man, at least when placed extraneurally.

Our feeling is that appearance of antibiody is our only possible index of success and that, before we can recommend Flury virus vaccine in place of currently accepted vaccines, we must find a way of using it that will result in as uniform an appearance of antibody as that following current forms of Pasteur treatment. Our goal, of course, is an effective vaccine free from the risk of neuroparalytic accidents.

—John P. Fox, Ph.D., professor of epidemiology, Tulane University of Louisiana, *Ibid.*, 70:569, (June) 1955.

POSTGRADUATE COURSES IN CHEST DISEASES

The Council on Postgraduate Medical Education of the American College of Chest Physicians will sponsor courses on diseases of the chest at the Hotel Knickerbocker, Chicago, October 3-7, and at the Park-Sheraton Hotel, New York City, November 14-18, 1955. Tuition for each is $75. Further information can be secured from the Executive Director, 112 East Chesnut Street. Chicago 11.

Coming Meetings

In State

Aug. 4	**Upper Des Moines Valley Med. Soc.** summer meeting, Spirit Lake
Sept. 15-16	**Annual Meeting, Iowa Academy of General Practice,** Des Moines
Oct. 13-14	**Joint Meeting, Mississippi Valley and Iowa Trudeau Societies,** Des Moines

Out of State

Aug. 8-12	**Hypnosis.** University of Calif., Los Angeles
Aug. 8-19	**Surgical Technic.** Cook County Grad. Sch. of Med., Chicago
Aug. 8-Sept. 2	**Surgical Anatomy and Clinical Surgery.** Cook County Grad. Sch. of Med., Chicago
Aug. 18-20	**W. Va. State Med. Assoc.** The Greenbriar, White Sulphur Springs, W. Va.
Aug. 22-Sept. 2	**Surgical Anatomy and Clinical Surgery.** Cook County Grad. Sch. of Med., Chicago
Aug. 28-Sept. 2	**American Congress of Physical Medicine and Rehabilitation.** Detroit
Aug. 29-31	**Anesthesia.** University of Calif., Los Angeles
Aug. 30-Sept. 2	**Biological Photographic Assn., Inc.,** annual convention. Hotel Wisconsin, Milwaukee
Aug. 31-Sept. 1	**AMA Public Relations Institute.** Drake Hotel, Chicago
Sept. 5-7	**Southwestern Surgical Congress,** seventh annual meeting. Hotel Muehlebach, Kansas City, Missouri
Sept. 7-9	**Office Psychotherapy in Psychosomatic Problems** (U. of M.). Itaska Park, Minn.
Sept. 7-9	**Minnesota Symposium on Arteriosclerosis.** Mayo Memorial, Minneapolis
Sept. 8-10	**Rehab. Neuromuscular and Rheumatic Diseases.** Creighton Memorial St. Joseph Hospital, Omaha
Sept. 8-10	**Utah State Medical Association,** annual session. Salt Lake City
Sept. 11-14	**Washington State Med. Assn.** Seattle
Sept. 11-21	**Medical Care of Atomic Casualties.** Walter Reed Army Medical Center, Washington, D. C.
Sept. 12-16	**Advanced Course in Gastroscopy.** Cook County Grad. Sch. of Med., Chicago
Sept. 12-23	**Surgical Technic.** Cook County Grad. Sch. of Med., Chicago
Sept. 12-30	**Gynecology and Obstetrics.** Cook County Grad. Sch. of Med., Chicago
Sept. 18-23	**Medical Society of Pennsylvania,** Pittsburgh
Sept. 19-23	**Surgery of Colon and Rectum.** Cook County Grad. Sch. of Med., Chicago
Sept. 19-Oct. 1	**Symposium on Otolaryngology.** Univ. of Illinois, Chicago
Sept. 20-23	**Colorado State Medical Society,** annual meeting. Shirley-Savoy Hotel, Denver
Sept. 21-22	**Pediatrics for Pediatricians.** Ctr. for Contin. Study, U. of Minn., Minneapolis
Sept. 23	**Northwest Pediatrics Society.** Minneapolis
Sept. 26-30	**Pulmonary Diseases.** U. of Colo. Med. Ctr., Denver
Sept. 26-Oct. 1	**Endocrinology and Metabolism.** U. of Indiana, Indianapolis
Sept. 26-Oct. 7	**Basic Principles in General Surgery.** Cook Co. Grad. Sch. Med., Chicago
Sept. 26-Oct. 7	**Surgical Technic.** Cook Co. Grad. Sch. Med., Chicago
Sept. 26-Oct. 7	**Medicine.** Cook County Graduate School of Medicine, Chicago
Sept. 26-Nov. 18	**Eight-week Course in Industrial Medicine.** Postgraduate Medical School of New York University, Bellvue Hospital, NYC
Sept. 28-30	**Michigan State Medical Society.** Grand Rapids
Sept. 28-30	**Mississippi Valley Med. Soc.,** annual meeting. Jefferson Hotel, St. Louis
Sept. 28-Oct. 1	**Oregon State Medical Society.** Portland
Oct. 1	**California Society of Internal Medicine.** Biltmore Hotel, Santa Barbara
Oct. 3-6	**Fall Clinical Conference, Kansas City-Southwest Clinical Society.** Municipal Auditorium, Kansas City, Missouri
Oct. 3-7	**Postgraduate Course in Chest Diseases.** Am. Coll. Chest Physicians, Hotel Knickerbocker, Chicago
Oct. 3-7	**Thoracic Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 3-14	**General Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 3-14	**Radiology.** Cook Co. Grad. Sch. Med., Chicago
Oct. 5-7	**San Francisco Heart Assn.,** 26th annual symposium on heart disease. St. Francis Hotel, San Francisco
Oct. 6-8	**Clinical Chemistry for Physicians.** Ctr. for Contin. Study, U. of Minn., Minneapolis
Oct. 7-8	**Pulmonary Diseases for General Practitioners.** Ohio State University Coll. of Med., Columbus
Oct. 8	**AMA Legislative Conference.** Chicago
Oct. 9	**AMA Medicolegal Symposium.** Chicago
Oct. 9-12	**California Academy of General Practice,** Sheraton Palace Hotel, San Francisco
Oct. 9-12	**Calif. Academy of General Practice,** 1955 scientific assembly. Sheraton-Palace Hotel, San Francisco
Oct. 10-12	**Clinical Electrocardiography.** U. of Colo. Med. Ctr., Denver
Oct. 10-14	**Esophageal Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-14	**Occupational Skin Problems,** University of Cincinnati
Oct. 10-14	**Pediatric Cardiology.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	**Clinical Uses of Radiosotopes.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	**Electrocardiography and Heart Disease.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	**Urology.** Cook County Graduate School of Medicine, Chicago
Oct. 10-21	**New York Academy of Medicine,** 28th graduate fortnight. "Problems of Aging," New York City
Oct. 11	**San Diego County Heart Assn.,** annual symposium on heart disease. U. S. Naval Hosp., Balboa Park, San Diego
Oct. 12-13	**Los Angeles County Heart Assn.,** 25th annual symposium on cardiovascular diseases. Wilshire-Ebell Theater, Los Angeles
Oct. 13-15	**Fourth Western Cardiology Conf.** U. of Colo. Med. Ctr., Denver
Oct. 15	**AMA Legislative Conference.** Omaha
Oct. 16	**AMA Medicolegal Symposium.** Omaha
Oct. 17-19	**Conference on Applied Therapeutics.** U. of Calif., San Francisco
Oct. 17-21	**General Surgery.** Cook Co. Grad. Sch. Med., Chicago
Oct. 17-21	**Pediatric Cardiology.** Cook County Grad. Sch. of Med., Chicago
Oct. 17-28	**Fractures and Traumatic Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 17-28	**Dermatology.** Cook County Graduate School of Medicine, Chicago
Oct. 17-Nov. 11	**Surgical Technic, Surgical Anatomy and Clinical Surgery.** Cook Co. Grad. Sch. Med., Chicago
Oct. 20-21	**Conference on Obstetrics & Gynecology.** U. of Calif., San Francisco
Oct. 20-22	**Fractures and Joint Injuries.** U. of Colo. Med. Ctr., Denver
Oct. 20-Nov. 4	**American College of Surgeons,** annual meeting. Chicago
Oct. 22-26	**American Heart Assn.,** scientific session. New Orleans
Oct. 24	**Gallbladder Surgery,** 10 hrs. Cook Co. Grad. Sch. Med., Chicago
Oct. 24-27	**Annual Assembly of the Omaha-Midwest Clinical Society.** Hotel Paxton, Omaha
Oct. 24-Nov. 4	**Gastroenterology.** Cook County Grad. Sch. of Med., Chicago
Oct. 26-27	**Annual Meeting of the Missouri Academy of General Practice.** Jefferson City
Oct. 27-29	**Postgraduate Gastroenterology** (Am. Col. Gastroenterology). Chicago
Oct. 30	**AMA Medicolegal Symposium,** New York City
Nov. 29-Dec. 2	**Interim Session, AMA.** Boston
Mar. 25-31	**Pan-American Med. Assn.** Interamerican Congress, Mexico City



FOUL BALL!

About 350 years ago, the aristocrats of London became tired, for the moment at least, of their customary amusements, among which were bear-baiting and cock-fighting, and of the people who staged them. Casting about more or less at random, they hit upon the novel idea of organizing companies of children to replace adult actors in their theatres, and the innovation achieved immense popularity. The youngsters' ineptness proved highly entertaining, and if, as frequently happened, they obviously could not understand what they were required to speak, or if the situations and the lines were clearly inappropriate to their youth and innocence, the audiences were especially delighted. In those days no one thought that the exploitation of children was reprehensible, but if anyone had made such a suggestion, no doubt one of the originators of the scheme would have dreamed up the idea that it was a means of preventing juvenile delinquency.

The Little League System, in which 8-12 year olds are being introduced to championship-competition baseball, is little more than a repetition of what happened in the first Queen Elizabeth's time. Little boys are put under considerable pressure to work—rather than play—several hours a day at learning and exhibiting skills for which, in most cases, their stage of development does not equip them.

It is inevitable that the process of growing has sapped Junior's strength, and his muscular coordination is by no means what it will be after four or five more years, but Papa—and often Mamma too—have made it crystal clear to him that he must "make the team," or "stay on the team" or "not let the team down," on penalty of losing their affection and esteem. Furthermore, since the practice sessions and games usually last through his family's dinner hour (The adult provocateurs cannot come to supervise and enjoy them at any other time), Junior eats peanut-butter sandwiches by himself at eight o'clock each night, instead of sharing in the well-balanced meal that his mother prepared for the rest of the family to eat at six, and he misses out on the impromptu conclave incident to the family meal, at which he could have learned valuable lessons and bolstered his impression of his family's solidarity.

The idea that the Little Leagues prevent 8-12 year olds from getting into mischief is no more than a rationalization. People merely have stumbled upon a new potential group of entertainers. In Iowa, at least, little boys infrequently get into serious mischief, for they are subject to relatively few temptations. Thus they have little need for the amount and intensity of outside-the-home activity that such programs force upon them. Rather, when adults preëmpt playing fields for the use of such little children, they force older boys—the potential delinquents—out of the parks and into the streets. Indeed, on one field that we know of, the grownups erected a fence across what used to be the middle of the outfield, with the result that grown boys and men are unable to play a game of baseball there at all.

Are those sorts of goings-on modern, or even sensible? Who, if anyone, will benefit, other than the type of man who buys his son a catcher's mit and mask before his wife has been released from the maternity ward at the hospital?

In Des Moines, opprobrium has been heaped upon members of the Board of Education for refusing Little Leagues the right to use school diamonds on Sundays. In this instance we are fully in sympathy with the Board. Though we have no statistics to support us, we are certain that a very considerable share of citizens regard games as a highly improper Sunday activity, and they are trying to get their sons and daughters to think so too. Certainly it is not within the province of an elected board—as it likewise should not be the right of the Little Leagues' managers—to interfere with that sort of home training.

As regards some other phases of the athletic program for youngsters, however, we hold views at variance with those of most school boards in the state, for we think that the school officials have permitted an altogether disproportionate emphasis on competitive athletics and subsidiary activities in the high schools.

Football and boys' basketball in the larger schools, and basketball for both girls and boys in the smaller ones are being permitted to disrupt both academic work and family life. Practice sessions last from 3:30 to 6:00 or even 6:30, rather than from 3:30 until 5:00 or 5:30, with the result that boys and girls are prevented from getting home before dark and in time for dinner. There almost never is an opportunity for an "athlete" to consult his teachers after school hours, nor is there sufficient energy left him for any after-dinner school work or for the minor domestic chores, the chief benefit of which is the impression they give a child of his responsibility for helping maintain the home. Furthermore, so many interscholastic games are scheduled that some of them must be run off on school nights, with the result that both participants and student spectators are even prevented from getting to bed on time. Frequent "pep fests" are permitted during school time, some of them lasting more

than an hour, and when a basketball team has been unusually successful, a series of tournaments deprives participants and non-participants alike of one, two or three weeks of classroom work.

Our school boards should be reminded that they have been entrusted with educational plants and equipment worth hundreds of thousands of dollars, and are employing teachers at an average wage of about $2.50 per hour, each. The dollars-and-cents cost of closing school for an hour a week—not to mention a whole day or a whole week—and of sanctioning schedules that sap students' learning efficiency should give them serious concern.

Then, too, there is the very real danger that sports heroism will make boys and girls feel grown-up prematurely. The tears into which girl basketball teams frequently dissolve when they have been eliminated from a tournament aren't symptomatic of anything good. Our sons distress us when they demonstrate the technics of eye-gouging, hip-throwing and spiking by which their coaches have taught them to cripple their opponents. And we wonder what has happened to the high ideals of sportsmanship when they tell us the coach says a football player is no good unless he "gets mad." But we are most worried when an overdose of adulation from his friends and his elders, and the acclaim given him by a sportswriter has made a son of ours feel so grown-up and self-sufficient that he is no longer tolerant of the advice and restrictions that we want him to accept. Because we live in Des Moines, rather than in any of a couple of hundred smaller Iowa towns, our daughters haven't been subjected to that sort of head-turning, a circumstance for which we are deeply thankful.

We want our children to have physical training, and we want them to enjoy themselves by playing games, dancing, singing or engaging in any other sort of harmless recreation. But we don't think it is good for them to feel compelled always to win, and we want them to be treated as children and to think of themselves as children until they have attained emotional, intellectual and physical maturity, together with as much of an education and of moral training as we and their teachers, unimpeded, can provide them.

THE LEGISLATURE'S RECORD

A comparison between the budgetary requests from institutions supervised by the State Board of Education (now renamed "Board of Regents") and the appropriations granted them this year has demonstrated that the 1955 General Assembly did almost exactly as it was asked in providing money for schools and hospitals in which doctors of medicine are principally interested.

It is worth noting, however, that the legislators dragged their feet as regards the request that was made for funds to set up diagnostic and treatment facilities for emotionally disturbed and mentally retarded children. When a bill calling for an appropriation of approximately three-quarters of a million dollars for that purpose had passed the House, but failed to get through the Senate, separate riders were attached to other appropriation bills, with the result that the General Assembly voted $15,000 per year for salaries and supplies and $65,000 per year to finance other expenditures for the project, until it meets again in 1957. Neither of those amounts is included in the figures that are presented in the accompanying tabulation, for they were earmarked for neither the University Hospitals nor the Psychopathic Hospital.

It is probable that the funds that have been made available will be sufficient for no more than a pilot project in the diagnosis and treatment of mentally disturbed and/or retarded children, and it remains to be decided whether it will be set up as a separate institution administered through the University by the Board of Regents, or whether it will be handled through one or more of the existing units—the Pediatrics Department of the College of Medicine, the University's School of Social Work, the Psychopathic Hospital, and the Hospital School for Severely Handicapped Children.

The appropriation for capital expenditure at the School for the Deaf will be spent in building and equipping a new primary school building. At Oakdale, the authorized funds will finance the construction of kitchen and dining room facilities in one of the buildings and necessary additions to the power plant.

	Univ. Hosp.	*Psycho. Hosp.*	*Hosp. School*	*Braille School*	*School for Deaf*	*Oakdale T-B*
Requests for running expenses and equipment*	$4,092,500	$429,586	$430,550	$349,107	$582,231	$963,108
Appropriated by General Assembly*	3,916,222	415,000	430,550	337,380	566,297	922,330
Difference	-176,278	-14,586		-11,727	-15,934	-40,778
Requests for repairs, alterations, etc.*	166,000	12,000	5,000	70,000	21,100	57,000
Appropriated by General Assembly*	166,000	12,000	5,000	70,000	16,000	57,000
Difference					-5,100	
Requests for capital improvements**				275,000	425,000	1,048,750
Appropriated by General Assembly**					300,000	738,750
Difference				-275,000	-125,000	-310,000

* For each year of the biennium.
** For the biennium.

DIAGNOSIS OF NEOPLASM FROM SEROUS EFFUSION

The difficulty in establishing a diagnosis of malignant neoplasm by the examination of the cellular sediment from serous effusion has been emphasized again.* Success in the discovery of malignancy by this method is conditional upon many factors. In the first place, though it is obvious that the neoplastic cells must be present in the fluid to be examined, they are not always there, even though a neoplastic process is located immediately beneath the serous membrane and has produced the effusion. Inflammatory cells and serous ones, altered by the irritative phenomenon of the nearby neoplasm, may be found in the fluid, but the neoplastic cells themselves are not there.

Second, neoplastic cells, like most other kinds, contain within themselves proteolytic enzymes which produce the changes of autolysis when the metabolic processes of the cell are altered either by decreased availability of oxygen or by the aging process of the cell itself. Therefore, autolysis may distort the appearance, or stain-binding qualities, of the cell while it is suspended in the fluid medium either in the body or after it has been withdrawn but before the enzyme action has been stopped by fixation. Therefore, even though neoplastic cells may be present in the fluid of a serous cavity, they may be altered or destroyed by autolytic processes before they can be examined.

Third, the neoplastic cells may be greatly outnumbered and their presence obscured by large numbers of inflammatory or other reactive cells. Bacterial contamination of fluid in a serous cavity by blood-borne infection or by adjacent lesions of the digestive or respiratory tract is a common complication of neoplastic involvement of serous membrane. Inflammatory and reactive cells in the fluid medium are, therefore, not rare.

Last, and probably most important, the morphologic features of neoplastic cells are not always characteristic. To be sure, there are features which, in general, serve to distinguish them, but it is not always possible for one to distinguish one or two cells of the general neoplastic class from all individual cells of all other classes. There is a considerable overlap between limits of size and morphologic features of neoplastic cells and those of reactive or hyperplastic ones. Identification is especially difficult when one is confronted by mesothelial cells that have undergone reactive changes stimulated by the irritative phenomena of nearby or adjacent neoplasm or of serous effusion itself.

All of this is not intended to say that the examination of cellular sediment from the fluid of serous effusion is not worthwhile if neoplasm is one of the lesions under consideration. But there are many disappointments, and one should not expect too much of a method in which there are many inherent limitations.

* Perou, M. L., and Littman, M. S.; Diagnostic study of serous effusions with emphasis on some unusual findings. Am. J. Clin. Path., 25:467-479, (May) 1955.

AMA HOUSE OF DELEGATES

Gerald G. Gross, the editor of WASHINGTON REPORT ON THE MEDICAL SCIENCES, a newsletter of considerable interest and value to which our Society subscribes, has called attention* to "the surprising strength displayed by the liberal element of AMA's House of Delegates" at the recent meeting in Atlantic City.

A shift of only 11 ballots, he points out, would have given AMA sanction to MD teaching in osteopathy schools, for the Kline Committee's report was shelved no more decisively than 101-81.

Furthermore, Mr. Gross points out, "Atlantic City was the third consecutive session of the House of Delegates at which it restrained itself from castigating pending national health bills and their sponsors." And instead of killing a resolution that had been brought by the Michigan delegation asking that Congress be petitioned to permit voluntary Social Security coverage for physicians, the House referred it to the Board of Trustees, directing it—somewhat strangely—to draw up and circulate a list of reasons for opposing *compulsory* coverage.

Though the House adopted a District of Columbia resolution urging Congress to stop adding to the list of diseases which the VA must presume to be service-connected if they are diagnosed within a given number of years after the patients' separation from the armed forces, Mr. Gross notes that it fought shy of asking, as the Florida delegation wished, that tuberculosis be removed from the list of ailments for which the AMA sanctions government care of all veteran patients. A Texas demand for repeal of the premium-waiver provision of the new Social Security law was pigeonholed, presumably disapproved.

Finally, Mr. Gross points out, came "a development probably without precedent"—the House of Delegates endorsed a bill proposed by a New Deal Democrat, Senator Hubert H. Humphrey, of Minnesota, to authorize disposal of federal surplus property for civil defense purposes.

* WASHINGTON REPORT ON MEDICAL SCIENCES, No. 417, June 13, 1955.

Attend the Annual Meeting of the Iowa State Medical Society April 22-25, 1956.

MR. RAY STEWART



The Board of Trustees of the Iowa State Medical Society has employed Mr. Ray Stewart as director of public relations for the Society and for Blue Shield. He will devote half time to each of the two organizations.

Mr. Stewart has come to Des Moines from Ames, where he has been a producer on the staff of the Iowa State College television station. Among the series of programs for which he has been responsible there is the State Society's "Your Health," and he is to continue as its producer and moderator. "The Eleventh Commandment," a series of broadcasts dealing with the social problems that bring people to institutions of various sorts, is another of the projects in which he has been engaged at WOI-TV and which he will continue. He has received national television awards for "Your Health," "In Our Care," and "Thursday's Child." He is a graduate of the University of Denver, and has a master of science degree from Syracuse University.

Those of us who have become acquainted with him through his television programs recognize the depth and sincerity of his interest in health and other community problems, and respect the competence that has been reflected in his work. He is certain to prove a valuable member of the Medical Society and Blue Shield staffs.

RENAL INJURY PRODUCED BY BOXING

Summarizing findings from analysis of prizefighters' urine specimens collected before and after matches at Madison Square Garden and St. Nicholas Arena, Dr. R. D. Amelar and Dr. C. Solomon* have reported, "an effect of acute trauma" the severity of which is directly proportional to the duration of the fight. Erythrocytes and casts, they point out, have not been reported in urine due to exercise alone.

Freshly voided urine specimens were collected on the day of the fight from 139 professional boxers while they were undergoing routine prefight examination in the Medical Office of the New York State Athletic Commission. In 103 instances comparative analysis, before and after the fight, were carried out. In 36 cases no "after" specimen was available, either because the scheduled match failed to take place, or because the boxer was unable to urinate immediately afterward. Pathologically significant amounts of red blood cells were present in the urine of 73 per cent of the boxers; granular or hyaline casts in 26 per cent. An attempt was made to correlate the severity of urinary changes with such factors as the estimated severity of blows to the kidney region, the weight of the boxer and the dimensions of the protective muscle mass. But the only significant factor appeared to be the number of rounds fought. Of the group fighting 7-12 rounds, 89 per cent showed hematuria afterward, whereas no more than 65 per cent of those fighting 1-6 rounds showed it. Analogously, albuminuria was present in 87 per cent of the former group, but in only 60 per cent of the latter.

Urinary changes—from clear before the fight to turbid immediately afterwards—were seen in 46 per cent; specific gravity increased in 80 per cent; the pH of the urine decreased in 39 per cent; sugar was found found in 9 per cent of the "after" samples; traces of acetone were present in 14 per cent; and small numbers of crystals, mostly calcium oxalate, were seen in 20 per cent.

The interesting problem of the effect of repeated trauma producing scarring of the kidneys and an eventual decrease in renal function remains to be studied, the authors pointed out. This could be done in retired boxers, too old to fight in the ring.

How would active boxers react to the recommendation that they should not be allowed to fight again until their urinary findings had returned to normal? When the authors tried to get specimens for periodic urinalysis, they were unable to secure the men's cooperation. Such studies, they emphasized, should be the next step.

* JOURNAL OF UROLOGY, 72:145, (Aug.) 1954, abstracted in Abbott Laboratories' WHAT'S NEW, Spring, 1955.

President's Page

The doctors of Iowa have been required by a small group of hospital administrators to defend themselves and their principles of medical ethics in court. I am gratified with the complete unity which has developed within our profession in response to this challenge. This support of the position of the ISMS would certainly not have been forthcoming if our cause were not basically just, legally and ethically correct, and, most important of all, completely in the interests of the public welfare.

I am informed by the Secretary that response to the levy of special dues by the Board of Trustees in accordance with a directive of the House of Delegates has been excellent. It appears that all Iowa physicians are willing to invest this additional $25 to preserve the independent practice of medicine, realizing that this very serious problem is one of national scope, going beyond the interests of a few specialists.

During the course of the trial it has become clear that a few Iowa hospital leaders are dedicated to the philosophy that hospitals have the right to employ physicians. Moreover, if you will take note of the ISMS news bulletin dated June 14, you will realize that Dr. C. U. Letourneau, a former high AHA official who testified earlier, holds a similar attitude.

It appears that the most basic issue in this trial is whether or not hospitals are going to take over the practice of medicine, hiring physicians to care for in-patients and ambulatory patients, dropping from their medical staffs those physicians unwilling to become subservient to administrative authority by accepting salaried positions.

L. R. Coffin, M.D.

President

COUNTY SOCIETIES

MEETINGS

Black Hawk

To the regular meeting of the Black Hawk County Medical Society on June 21, William Trotter, Ph.D., of the SUI Department of Speech Pathology brought a group of patients for a presentation on stuttering.

Hamilton

Dr. J. L. Ptacek, president of the Hamilton County Medical Society announced on June 18 that the organization will award a $150 scholarship to a deserving student at the Webster City Junior College. That amount is sufficient to cover a year's tuition. Last year, Webster City organizations and firms provided more than $2,000 for such scholarships.

Mahaska

After more than a year of study and comparison of fees in other Iowa counties and in other states, the Mahaska County Medical Society has compiled a standard average fee schedule for its members.

The charges are the same as those that have been in effect since 1946, with two exceptions: (1) night calls after 11 o'clock have been raised from $7.50 to $10, and (2) a fee of $3.00 has been authorized for the answering of questionnaires required by commercial health and accident insurance companies.

Scott

Dr. James F. Bishop was named chairman of a special committee of the Scott County Medical Society to plan the celebration of the organization's centennial in March, 1956, and Drs. J. H. Sunderbruch, L. H. Kornder, G. F. Harkness and T. W. McMeans were chosen to work with him. Dr. Elmer Hess, president of the AMA, has accepted an invitation to attend ceremonies on March 21. And among other things, the Scott County Society is planning to contribute the papers that will compose the scientific section of the February issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Woodbury

Progress that has been made and steps that remain to be taken in preventing a recurrence of floods in the Sioux City area were explained to 120 members of the Woodbury County Medical Society at a meeting held at the Martin Hotel on June 16. The speakers were Mr. James Smith, of Omaha, manager of the Missouri River Division of the Mississippi Valley Association; Col. Thomas J. Hayes, Omaha District engineer of the U. S. Army Corps of Engineers; and Mr. Paul Wilderson, president of the Sioux City Chamber of Commerce.

DEATHS

Dr. William V. Thornburg, 75, died at his home in Guthrie Center on June 18, about two weeks after suffering a stroke. He had practiced medicine in the vicinity of Guthrie Center for about 45 years and was a Life Member of the Iowa State Medical Society.

Dr. Charles A. Katherman, 78, a Sioux City physician and surgeon for 46 years, died there on June 10 following a heart attack.

Dr. Frank Reinsch, 61, of Ashton, died at Osceola Hospital on July 5, of inoperable cancer. He had retired in 1952 after practicing medicine in Osceola County for 35 years.

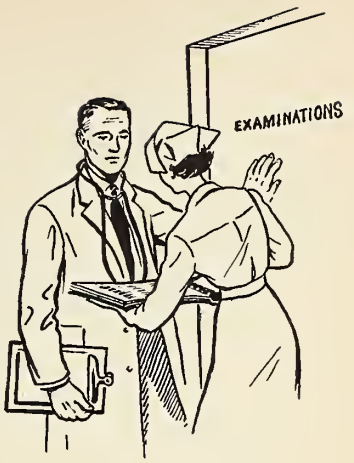
Dr. Frank Wilson Dean, 92, an oculist at Council Bluffs for nearly 60 years, died on July 3. He was Life Member of the Iowa State Medical Society and had been active until last August, when he fell and broke his hip.

INSTITUTE OF AGRICULTURAL MEDICINE

The State Board of Education gave its formal approval, on June 24, to the establishment of an Institute of Agricultural Medicine at the SUI College of Medicine.

Last April, Dean N. B. Nelson announced that proposals for such a division had been submitted to a national foundation, in hope that outside funds could be secured for it. The Iowa institute will investigate farm health problems and conduct research on diseases prevalent among farm people and on means of preventing them.

THE DOCTOR'S BUSINESS



Non-Business Expenses Are Important

MILLARD K. MILLS

WATERLOO

If you have followed the steps outlined in the previous articles in this series, you have now determined your profit from your profession. But don't stop there! Too many doctors, realizing that they have a nice business profit, go merrily on their way, spending freely. At the end of the year they are amazed to discover that they have little to set aside for their retirement. Why must you do more?—because other factors are playing a part in your financial life and should not be overlooked.

First, let's consider the other expenses which you have. Some of these "Class B" expenses cannot be controlled—for instance the personal property, real estate, sales and excise taxes that you pay. However the non-business interest for which you obligate yourself, your contributions and your own and your family's medical expenses are also deductible items that will have a bearing on your net gain.

INTEREST

Class-B interest is the interest that you pay on non-business loans. Frequently a doctor's bank account accumulates over the months until he has a rather sizable sum lying idle in the bank. Meanwhile, he is paying five or six per cent interest on money that he has borrowed.

Generally, if a doctor retains approximately enough in the bank to meet three months of his business expenses, he has a sufficient cash reserve. The rest should be put to work for him.

Investigate the possibility of repaying your loan in advance of your prearranged terms. After a certain period of time, some mortgages can be paid off in a lump sum at a greatly reduced rate of interest. Others permit double payments in one month, thereby permitting more than double what would otherwise have been the reduction of principal.

Whenever you are paying interest, even though it is a deductible item, it will generally be to your benefit to reduce that interest. It's only under very rare circumstances—when a doctor is in an unusually high income bracket—that he can make money by paying interest.

You also run the risk of undertaking a mortgage during a period of inflation when prices are abnormally high. When economic conditions level off or when recession sets in, you will still be paying the inflated price. That hurts!

CONTRIBUTIONS

The matter of contributions is also worthy of consideration. Generally, the deduction for gifts or contributions by an individual is limited to 20 per cent of his adjusted gross income for the year. The 1954 Code, however, increased this to 30 per cent if the extra 10 per cent is paid to a church or association of churches, a tax-exempt educational organization, or an exempt hospital.

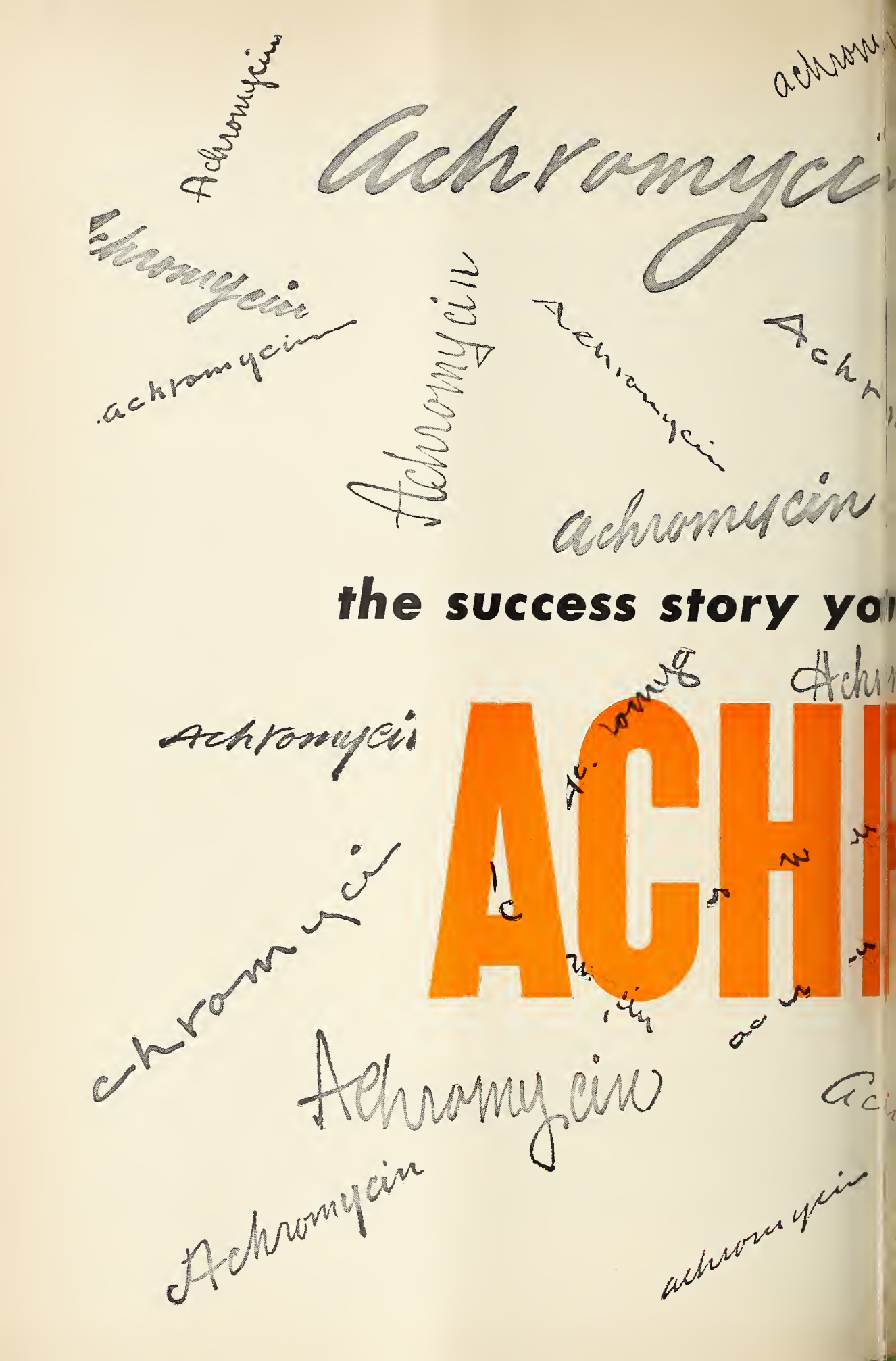
Here's an angle that deserves your attention if you have a long-range contribution plan. You may purchase property to be donated at a future date. If that property increases in value, as it well may do in an inflationary period, rather than deducting the purchase price, you are permitted to deduct the appraised value of the property at the time you make the contribution. Under those circumstances, you are not required to pay any tax on the gain involved.

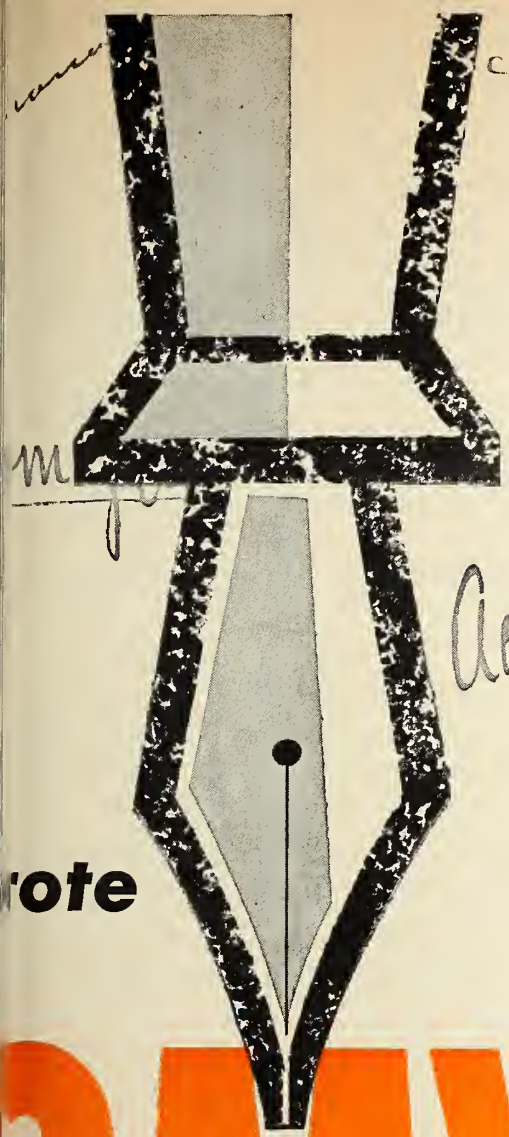
MEDICAL EXPENSES

The Code now permits deduction of medical expenses in excess of 3 per cent of adjusted gross income, instead of 5 per cent. Amounts paid for drugs and medication are allowable in excess of 1 per cent. Insurance received, of course, must be deducted before one claims the allowance.

Because these expenses *are* important to your financial program, give them the attention that they deserve!

Mr. Mills is general manager of Professional Management.


Achromycin
achromycin
the success story yo
ACH



Achromycin

Achromycin

Achromycin

Achromycin

Achromycin

Achromycin

Achromycin

ote

OMYCIN*

HYDROCHLORIDE

Tetracycline HCl *Lederle*

When you have prescribed ACHROMYCIN you have confirmed its advantages—again and again. It is well tolerated by patients of every age. Compared with certain other antibiotics, it has a broader spectrum, diffuses more rapidly, is more soluble, and is more stable in solution. It provides prompt control of many infections including those caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa. Furthermore, it is a *quality* product; every gram is made under rigid control in Lederle's *own* laboratory.

ACHROMYCIN, a major therapeutic agent now...growing in stature each day!

dry-filled capsules

LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* PEARL RIVER, NEW YORK

*REG. U. S. PAT. OFF.

Lederle

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

MANAGEMENT OF DISORDERS OF THE AUTONOMIC NERVOUS SYSTEM, by *Louis T. Palumbo*, M.D. (Chicago, The Year Book Publishers, Inc., 1955. $5.00).

A TEXTBOOK OF MEDICINE, ed. by *Russell L. Cecil*, M.D., *Robert F. Loeb*, M.D., *et al.* (Philadelphia, W. B. Saunders Co., 1955. $15.00).

DIFFERENTIAL DIAGNOSIS (The Interpretation of Clinical Evidence), by *A. McGehee Harvey*, M.D., and *James Bordley III*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $11.00).

SURGICAL FORUM (Proceedings of the Forum Sessions, 40th Clinical Congress of the American College of Surgeons, Atlantic City, N. J., November, 1954), ed. by the Committee on Fundamental Surgical Problems. (Philadelphia, W. B. Saunders Company, 1955. $10.00).

PATHOLOGY FOR THE SURGEON, by *William Boyd*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $12.50).

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION, ed. by *Richard H. Hewitt*, M.D., *A. B. Nevling*, M.D., *John R. Miner*, B.A., *James R. Echman*, Ph.D., *M. Katharine Smith*, B.A., *Carl M. Gambill*, M.D., *Florence Schmidt*, B.S.E., and *George G. Stilwell*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $12.50).

THE PRACTICE OF DYNAMIC PSYCHIATRY, by *Jules H. Masserman*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $12.00).

COMMUNICABLE DISEASES, by *Franklin H. Top*, M.D. (St. Louis, The C. V. Mosby Company, 1955. $18.50).

AGEING—GENERAL ASPECTS, ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Margaret P. Cameron*, M.A., A.B.L.S., assisted by *Joan Etherington*. (Boston, Little, Brown & Co., 1955. $6.75).

BOOK REVIEWS

CORNELL CONFERENCES ON THERAPY, Vol. VII, ed. by *Harry Gold*, M.D. (New York, The Macmillan Company, 1955. $4.50).

The series of Cornell Conferences on Therapy was inaugurated in 1937 as a joint venture of the Departments of Medicine and Pharmacology of Cornell University Medical College. They were originally published in JAMA and subsequently in the NEW YORK STATE JOURNAL OF MEDICINE. The plan of printing the Conferences in book form was adopted in 1946.

In this issue, 15 topics are discussed. Subjects vary from "How to Evaluate a New Drug" to "Management of Poisoning by Pesticides." The topics are a random sampling of therapeutic subjects, as they have been in years gone by. The material is presented in conversational fashion, with questions and answers by various participants. The consultants who compose each panel are of excellent medical caliber, so that their statements have a great deal of authority, and the reader will find that many of his questions have been anticipated and are answered for him.

The disadvantage of such a book is that it cannot be used, and indeed was not intended, as a reference text. Except that they are all therapeutic, the subjects are completely miscellaneous, and there is neither rhyme nor reason about the order in which they have been arranged. Rather, the value of the book is in its easy readability and relative authoritarianism.

It would be a good book to read on a trip or at home after a hard day's work.—*Daniel A. Glomset*, M.D.

THE HUMAN ADRENAL CORTEX (CIBA FOUNDATION COLLOQUIA ON ENDOCRINOLOGY, Vol. VIII), ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Margaret P. Cameron*, M.A., A.B.L.S., assisted by *Joan Etherington*. (Boston, Little, Brown and Company, 1955. $10.00).

If one is writing a paper on the adrenal cortex or is preparing a report on a series of cases involving this gland, here is a most detailed text for reference. It is a collection of research reports by the most authoritative investigators of America and England. It begins with anatomical and physiological reviews, then branches into the actions of the adrenal secretions. Several chapters are devoted to the newly announced fraction aldosterone (electrocortin).

Occasionally we may encounter adrenalectomized patients, and in this book we can find what metabolic effects are expected, as well as how best to manage such cases. Cushing's syndrome is discussed in detail, and a final section is devoted to psychological influences on the adrenal.—*Arthur G. Lueck*, M.D.

FLUOROSCOPY IN DIAGNOSTIC ROENTGENOLOGY, by *Otto Duetschberger*, M.D. (Philadelphia, W. B. Saunders Co., 1955. $22.00).

To the reviewer's knowledge, Dr. Duetschberger's text on fluoroscopy is the first complete treatise on the subject alone. It emphasizes the importance of the fluoroscopic examination, pointing out where it may reveal diagnosis that films alone cannot. Conversely, it deals adequately with the limitations of the fluoroscope for many procedures. These characteristics make it unique.

The book is extremely well organized and in the first seven chapters makes available to the student of roentgenology a complete source of information on the physical aspects of the production of the fluoroscopic image. Also the latest types of apparatus are fully described and illustrated in those opening chapters.

The eighth chapter has a wealth of information on foreign bodies and their localization which would be of invaluable aid to the radiologist who is engaged in a large industrial practice. The remaining five chapters are well organized presentations of the use of the fluoroscope in the diagnosis of many diseases

of the body. In each anatomical area there is a discussion of the normal fluoroscopic image, the technic of examination and abnormal findings in various diseases.

The amount of thought and study that preceded the compilation of this text is well evidenced by the large number of references to be found at the end of each chapter. The book is not only a ready reference for immediate information, but is a catalog of articles on each of the subjects with which it deals.

This work should be readily available to any physician who uses the fluoroscope. I am sure the radiologist will find it a valuable aid, and I believe that the occasional fluoroscopist will find it a necessity when once he has seen it.—*Noble W. Irving,* M.D.

MENTAL ILLNESS

ATYPICAL DEPRESSIONS

Depression as an entity has long been recognized in medicine. In its classic form, there is depression of mood with mental and motor retardation, but in some cases there is much apprehension and even agitation. Also, because classically depressed patients have an inclination toward self-depreciation and a hopeless attitude toward the future, they sometimes attempt suicide.

Many more patients, however, suffer mild or atypical depressions, and it is in these cases that the diagnosis is more likely to be missed.

Symptoms about the head may be prominent. One of these is headache, commonly localized in the occiput. The patients also speak of heavy, dull or dopey feelings in the head. There may be drawing sensations about the eyes, blurring of vision, and transient episodes of diplopia. Many of these patients have had their glasses changed in an effort to improve their vision and concentration. They commonly report circulatory complaints, usually those associated with tension, such as tachycardia, tightness in the chest, precordial pain, and flushing or coldness. Gastrointestinal symptoms include diminution in appetite, a flat taste in food, dryness of the mouth, and constipation, or occasionally diarrhea alternating with constipation. Such symptoms often lead to loss of weight. A review of the genito-urinary system may reveal frequency of urination, diminution or loss of libido and reduction in menstrual flow. The neuromuscular system is regularly involved, the complaints being fatigue or weakness, loss of energy, tremors, muscular twitching, muscular soreness and drawing. These are most commonly found in the muscles located up and down the spine. Sleep disturbance is common. The complaint may be of difficulty in going to sleep, of broken sleep or of early morning awakening, the latter being an almost pathognomonic sign of depression. The diurnal rhythm of the depressed patient is of interest. He usually feels worse in the morning than later in the day. Retardation, if present, the patient describes as an inability to make his thoughts come as rapidly as normal, or as a difficulty in getting started or in accomplishing much.

These patients are sensitive about their ill health and withdraw from social activities, fearing that others can detect their illness. There is a loss of self-confidence, a restriction of interests, an indecisiveness and some trouble in concentration. The patient may say he has lost his enjoyment of life, that things now seem dull and that small tasks appear mountainous. And if the patient is of a somewhat suspicious nature, he may even get the notion that other people are somehow trying to embarrass or annoy him.

Because these complaints do not fit a typical picture of somatic disease or because the complaints are vague or fleeting, such patients are subjected to a wide variety of laboratory and X-ray studies, all of which are negative or noncontributory. Admittedly, the diagnosis may be difficult, and it is necessary to rule out other diseases.

After the proper diagnosis has been made, the patient must be reassured. He should be told that he has an illness that is usually of a fairly temporary character, from which he will recover in a period of several months. He should be encouraged to eat, to rest, to stay out of situations that make him tense, to work within the limits of tolerance and not to develop excessive fatigue. Certainly he should *not* engage in a kind of frantic and grim series of parties or other activities to "snap himself out of it." Dexamyl or various combinations of sodium amytal and dexedrine sulfate are very helpful. One or two tablets of Dexamyl at breakfast and at lunch may tide the patient over his most difficult period of the day. As a general rule, sodium amytal, grains 1, and dexedrine sulfate, mg. 5, at breakfast and lunch accomplish the same purpose. If the patient is tense, the amytal fraction may need to be increased or the dexedrine sulfate fraction reduced. If he is retarded, the dexedrine fraction may be increased while the amytal is reduced. One varies the proportions of amytal and dexedrine depending upon the degree of tension or of retardation present.

If this regime is unsuccessful and if the patient continues depressed or is growing worse, then he should be referred to a psychiatrist for further evaluation and treatment.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529-36th Street, Des Moines 12, Iowa.

Iowa Academy of General Practice

ANNUAL MEETING
IOWA ACADEMY OF GENERAL PRACTICE

Hotel Savery, Des Moines, Iowa

Thursday, September 15

8:30 a.m.	Registration
9:45 a.m.	"When Is a Foot Abnormal?" Carroll B. Larson, M.D., Iowa City
11:00 a.m.	"Variations in Normal Roentgenograms" Floyd A. Springer, M.D., Des Moines
12:15 p.m.	Luncheon (Speaker to be announced)
2:15 p.m.	"The Athletic Injury" W. D. Paul, M.D., Iowa City
3:30 p.m.	Annual Meeting
6:30 p.m.	Reception
7:00 p.m.	Dinner

Friday, September 16

8:15 a.m.	Registration
9:15 a.m.	"Recognition of Neurotic and Psychotic Patients in Medical Practice" Louis G. Moench, M.D., Salt Lake City, Utah
9:45 a.m.	"What Part Should General Practitioners Play in the Care of Psychotic Patients?" Sidney L. Sands, M.D., Des Moines
10:15 a.m.	"Emotional Problems in Pregnancy" Philip F. H. Pugh, M.D., Sioux City
11:00 a.m.	"Emotional Tragedies in Infancy and Childhood" John G. Young, M.D., Dallas, Texas
11:30 a.m.	"The Suicide" Louis G. Moench, M.D., Salt Lake City, Utah
12:15 p.m.	Luncheon (Speaker to announced)
2:15 p.m.	"Teen-age Problems" John G. Young, M.D., Dallas, Texas
2:45 p.m.	"Use of Medications in Psychiatric Patients" Philip F. H. Pugh, M.D., Sioux City
3:30 p.m.	"Mental Health of the Prospective Bride and Groom" Sidney L. Sands, M.D., Des Moines
4:00 p.m.	Question-and-Answer Panel Sidney L. Sands, M.D., moderator

PURPOSES OF THE IAGP

The constitution of the Iowa Academy of General Practice provides that the organization shall "assist in providing postgraduate study courses for general practitioners, and . . . encourage and assist practicing physicians and surgeons in participating in such training."

Our programs are planned so as to meet the requirements of the Education Commission of the American Academy for study course credit (formal). The subjects are always interesting, timely and well arranged, covering the newer concepts of medical practice and presented by the best teaching talent available.

Because we believe that no doctor can practice good medicine without regular postgraduate training, we have established 150 hours postgraduate study every three years as a requirement for continuing membership in the American Academy of General Practice.

All physicians and surgeons of Iowa are invited to attend our scientific sessions. They will feel well repaid for the time they spend in attendance.

The program for our scientific session, September 15 and 16, at the Hotel Savery, Des Moines, is published on this page. Members and other interested physicians should make their own hotel reservations. They and their wives will be welcome at all sessions, luncheons and banquets.

UPPER DES MOINES VALLEY MEDICAL SOCIETY

The summer meeting of the Upper Des Moines Valley Medical Society will be held at Vacation Village on Lake Okoboji, Spirit Lake, on Thursday afternoon, August 4, 1955. All members of the profession will be welcomed, and they are invited to bring their wives.

The men who will present the scientific program are all members of the faculty of the College of Medicine at S.U.I. At 1:15, Dr. R. G. Bunge, of the Department of Urology, will speak on "Male Infertility"; at 2:15, Dr. Henry E. Hamilton, of the Department of Internal Medicine, will speak on "Enteric Infections and their Management"; and at 3:15, Dr. W. C. Keettel, of the Department of Obstetrics and Gynecology, will discuss "Prolonged Labor."

SCURVY IN IOWA—A CASE REPORT

On February 21, 1955, I was called to see Mr. C. K., age 76, an old age pensioner. He stated that he had been ill since early January, 1955, that he had become very weak and that he had fallen several times. He had lost his appetite, and his limbs and joints had become painful and swollen. His diet had been lunch meat, cheese and bread for more than a year.

Physical examination revealed a man 76 years of age who was very weak. His blood pressure was 132/72; his red blood cell count was 2,960,000; hemoglobin 62; and leukocytes 11,000.

Eyes: cataract operation right eye; left eye has cataract.

Ears: slight deafness; drums normal.

Mouth: teeth bad; gums sore and bleeding.

Chest: lungs apparently clear.

Heart: size normal; rate 70.

Abdomen: slightly tender over region of liver.

Other findings: enlarged prostate; a few pus and red blood cells in urine; reflexes normal; both forearms covered with large areas of hemorrhage and sore to pressure; left wrist sore and swollen.

I diagnosed his ailment as scurvy, and put him immediately on daily intravenous doses of vitamin C (100 mg.) for about two weeks. I also prescribed a scurvy diet, which included plenty of oranges.

His recovery was rapid, and at present (May 14), the hemorrhage areas, swollen joints and sore gums have cleared up. Because he was not hospitalized, vitamin C levels were not taken.

Frank R. Richmond, M.D.
Fort Madison

NUTRITION EDUCATION AT THE SUPERMARKET

In a five-year Iowa statewide project by Eppright of Iowa State College (1954), a deficiency of calcium and vitamin C was found. Most conspicuous for poor diets were the teen-age girls—a situation cited as particularly alarming because of its potential effects on the next generation. In a study by the agricultural experiment stations of six northeastern states, conducted in 1952, the diets of pregnant women, industrial workers and students from kindergarten through colleges were judged. . . . The most common and serious deficiency was vitamin C; deficiencies in calcium and vitamin A also occurred frequently. In New York State, Trulson examined three-day diet records of 10,000 children, half of them in the fourth and half in the tenth grade, and found the poorest food practices among the older girls.

Another group suspected of prevalent nutritional inadequacy is the older population, people over 65—a group which has increased twice as fast as the total population since 1900. Nutrition science, using new biochemical approaches, offers much promise against the diseases of the later years. In the aged, poor diets may result from psychological, social, or mechanical difficulties. About four-fifths of this age group live with relatives. At the family table, the aged may be handicapped by dental and digestive difficulties, and even their status with the family may affect their diet. . . . Wisdom, tact, and patience are needed to promote good nutrition in this group . . . whether the physician, nutritionist, or a public advertisement conveys the information.

Let me point out where we have failed. . . . Most food sellers would know what food to tell families to buy in the store to combat these deficiencies. But they are missing a great opportunity for using that knowledge.

If we could educate the people in the fundamentals of good nutrition, they could be led to spend their money on good food in the market and on proper dietary supplements that would do them the most good.

Many outlets are now being used to good purpose, but we are failing to use one of the best avenues for putting the message across where it really counts—where food is displayed and sold.

We will never have a really successful program until the food sellers and the food industries cooperate with the scientists, nutritionists, and teachers in developing a positive, aggressive, coordinated program to present basic nutrition facts clearly and simply to the American housewife, so that she can use those facts at the point of sale for the best nutrition for her family.

I am sure that if some such plan can be evolved, it would prove to be good business practice and at the same time make a significant contribution to public health.

—William H. Sebrell, Jr., M.D., director of National Institutes of Health, in Public Health Reports, 70:561-563, (June) 1955.

NEW MANUAL FOR MEDICAL ASSISTANTS

A new, 500-page textbook or training manual, especially helpful to the girl employed in a physician's office, will be published by W. B. Saunders Co. (Philadelphia) next January.

Tentatively entitled "The Office Assistant—in Medical or Dental Practice," the book is being written by Portia Frederick, of Long Beach, California, an instructor in a two-year course for physicians' aides and laboratory technicians, and Carol Towner, of the AMA Public Relations Department.

It will contain training material designed to equip a girl to handle both the medical-assistant and the secretarial duties she is expected to perform in a physician's office.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

POLIOMYELITIS VACCINE PROGRAM

The Parke-Davis Company Salk Vaccine distributed in Iowa for the first injections in the National Foundation for Infantile Paralysis program for children in first and second grades in school was received late in April and used by the counties between that time and the middle of May. Over 90 per cent of the eligible children in Iowa received injections. Two counties, Calhoun and Jasper, were given the vaccine remaining from the first round to complete their second injections. Other counties, including Webster and Wapello, have given *some* second injections.

We are informed that our allocation of National Foundation for Infantile Paralysis vaccine for completing the program's second injections may be released soon, but we have no definite information as to the exact date. In accordance with our belief and that of the consultant group representing the State Medical Society, we are asking that if, when the vaccine is received, a county feels it can carry out the program during the remaining school vacation period, it notify us to that effect, so that we can send the allocated amount of vaccine. Those counties that are convinced they cannot carry out the program or for any reason could not have a satisfactory program during the summer, may indicate they want the vaccine sent after school starts. The State Department of Health and our Poliomyelitis Medical Advisory Committee have gone on record as not advocating giving first injections for poliomyelitis, should commercial vaccine become available, until the end of the poliomyelitis epidemic season, which might be the end of September or mid-October.

Current planning indicates that the U. S. Public Health Service has been given charge of distribution of commercial vaccine during "the period of shortage." That Service plans for distribution of all commercial vaccine on an allocation system through the offices of the state departments of health. Our Iowa State Board of Health, on July 12, recommended that we work with Governor Hoegh's Poliomyelitis Vaccine Administration Committee to set up plans for that program.

POLIOMYELITIS CASES REPORTED BY COUNTY

January 1 through July 9, 1955

County	*Cases*	*County*	*Cases*
Black Hawk	3	Marion	1
Boone	1	Marshall	1
Bremer	1	Mitchell	1
Clay	1	O'Brien	1
Clinton	4	Palo Alto	1
Dallas	4	Polk	10
Davis	1	Pottawattamie	1
Floyd	1	Sac	7
Franklin	2	Scott	1
Greene	1	Shelby	1
Grundy	1	Sioux	1
Guthrie	1	Story	2
Hamilton	1	Wapello	2
Hardin	2	Wayne	1
Jasper	3	Webster	2
Johnson	3	Woodbury	5
Keokuk	1		
Linn	5	Total	74

REPORT OF TUBERCULOSIS FIELD PROGRAMS

January 1, 1955 to May 31, 1955

Three tuberculosis case-finding programs are carried by the Division of Tuberculosis Control which are sponsored jointly by the Iowa Tuberculosis and Health Association.

The county-wide mass X-ray program begun in 1948 was the largest program until July, 1954, when budgetary reductions curtailed the work by reduction of X-ray equipment and personnel.

The contact case-finding program has been functioning since 1937 and is carried primarily for the purpose of following cases of tuberculosis, their contacts and tuberculosis suspects referred by the private physician. The program is scheduled approximately once a year in the counties served.

Special X-ray surveys are also made of county and state institutions, food handlers, industries, colleges or other schools, and communities where a tuberculosis problem exists.

Three mobile X-ray units are employed. They are equipped to take both 70 millimeter and 14″ x 17″ films.

All programs have the official approval of the county medical society before work is begun.

COUNTY-WIDE PROGRAMS

A survey of 2 counties was conducted during the past five months. Every adult, 7th grade and

over, was given an opportunity to have a chest X-ray.

Number 70 mm. films taken	11,362
Number referred for large films	128
Number 14 x 17 films taken	120
Number failed to report	8
Probably active	3
Probably inactive	3
Probably healed	16
Activity undetermined	10
Non-tuberculous findings (1 or more/person)	48
Healthy chests	40
Total	120

CONTACT CASE-FINDING PROGRAMS

Through this service persons who have had known or suspected contact with tuberculosis are tuberculin tested and X-rayed. Nineteen programs were completed as of May 31, 1955.

Number of 14 x 17 films taken	1146
Probably active	6
Probably inactive	37
Probably healed	151
Activity undetermined	45
Non-tuberculous findings (1 or more/person)	225
Healthy chests	682
Total	1146

Follow-through letters on probable cases of tuberculosis were sent to physicians for confirmation of diagnosis. Twenty-three confirmations were received.

Skin-testing of school populations has been added to the case-finding program. School participation can be on a county-wide or individual school basis. Class "A" Certificate requires 95 per cent to 100 per cent of children tested from kindergarten through high school and all adult personnel. Class "B" Certificate is awarded to schools with 80 per cent to 95 per cent participation. The public health nurse assists the physician in follow-through of all positive school reactors and family associates. Two county-wide and one consolidated school programs have been completed during the past few months.

Continuous follow-through on known and suspected cases of tuberculosis and suspected malignancies by county and staff nurses is maintained under the direction of the family physician.

SPECIAL AND EMERGENCY SURVEYS

Sixteen special and emergency programs were conducted during the past five months. Ten thousand five hundred sixty-eight (70 mm.) films were taken. Eighty-eight persons were referred locally for large chest films. Eighty-nine (14 x 17) films taken by the Mobile Unit revealed two probable cases of tuberculosis and 9 tuberculosis suspects. Four hundred ninety-five bus drivers were X-rayed.

Total number 70 millimeter films taken	22,425
Total number 14 x 17 films taken	1,355
I. Number cases tuberculosis reported for first time—January 1, to May 31, 1955	216
II. Number cases hospitalized	152
III. Number cases *probable tuberculosis* found in:	
County-wide programs	32
Contact programs	239
Special programs	2

ANALYSIS OF 714 NON-TUBERCULOUS FINDINGS

County-wide programs	89
Contact programs	373
Special programs	252
Thoracic Cage Anomaly	15
Bone Lesion	6
Pleural Abnormality	64
Post-operative Chest	25
Abnormal Diaphragm	12
Hilar Node Calcif.	83
Calcif. Diffuse Granulomatous lesions	53
Pneumonitis	35
Possible Neoplasm	19
Abscess	2
Fibrosis—Cause unknown	67
Incr. Bronchovascular mrkgs.	37
Bronchiectasis Suspect	19
Coin Lesion	31
Pneumothorax	1
Atelectasis	9
Emphysema	32
Mediastinal Mass	18
Abnormal Aorta	44
Abnormal Heart Size/Contour	132
Soft Tissue Abnormality	3
Susp. Histoplasmosis	7
Total	714

Query letters were sent to physicians regarding disposition of suspected malignancies (neoplasm—mediastinal mass—coin lesions, etc.) found in the three programs, January 1 to May 31, 1955.

Reported under observation	11
Malignancies confirmed by surgery or previously known	3
Number—surgery pending	1
Surgery not indicated or refused on account of age, physical condition, etc.	15
Other—not malignant	10
Negative	2

NUMBER OF NEW CASES OF TUBERCULOSIS REPORTED FOR THE FIRST TIME

January 1, 1955 to June 30, 1955 250

STAGE:

Minimal	25
Moderately advanced	70
Far advanced	105
Not classified (except as Pulmonary)	34
Not stated	5
Extra Tuberculosis	11

SOURCE OF REPORT:

Private Physician	38
Sanatoria:	
Broadlawns	21
Oakdale	74
Sunnyslope	7
Sunnycrest	7
Pine Knoll	7
River Heights	3
Veterans Adm.	23
Interstate	36
SUI Laboratory: (Positive Sputum)	8
Death Certificates	14
Other	12

HOSPITALIZED:

Broadlawns	22
Oakdale	76
Sunnyslope	7
Sunnycrest	7
Pine Knoll	7
River Heights	4
Mental Hospitals	4
SUI College Hospital	2
Veterans Adm.	23
Other	22
Not Hospitalized—or Not Stated	76

MENSTRUAL TABOOS

The phenomenon of menstruation has always provoked fear and misunderstanding, and many ancient superstitions concerning it persist today. The presence or the touch of a menstruating woman has been presumed to sour milk, to spoil meat, to rust iron, to cause animals to abort, to kill trees, men and animals, and to destroy crops. Because of these beliefs, most primitive tribes have established specific rules to govern the activities of women during menstruation, and severe penalties, even death, are meted to those who disobey.

It is understandable why some of the superstitions might persist among civilized people because the onset of menstruation can be a frightening emotional experience for girls who are unprepared for its appearance and unaware of its significance. It is considerably more difficult to understand why physicians not only retain many of the same superstitions but foster misinformation among their patients. Many women die each year from the effects of uterine malignancy because, on the advice of their doctors, they have waited patiently for weeks or months for abnormal bleeding to stop so they can be examined to determine its cause. This happens not only in young women but in those long past the menopause, in whom menstruation could not by any stretch of the imagination be present.

It is high time that physicians discard their own menstrual taboos, recognize the difference between normal menstruation and abnormal bleeding and teach their patients by precept and example to be fearful of unusual bleeding no matter how minimal the amount.

There is no logical reason why women should not be examined while they are bleeding, and as an educational measure, secretaries should be instructed to discourage women from canceling appointments for pelvic examinations simply because of a period. Failure to examine a woman who is bleeding abnormally constitutes negligence, because intermenstrual or post-menstrual bleeding, or irregular, profuse or prolonged periods are always abnormal.

—J. Robert Willson, M.D., in PHILADELPHIA MEDICINE, 50:1349, (June 24) 1955.

AMA PUBLIC RELATIONS INSTITUTE

The 1955 AMA Public Relations Institute is to be conducted at the Drake Hotel, in Chicago, on August 31 and September 1. Copies of the program will be mailed shortly.

Au^{198} EFFECTIVE IN PROSTATIC CANCER

Treatment of moderately advanced prostatic cancer with radioactive gold has produced worthwhile results, Dr. H. Dabney Kerr, retiring director of the Department of Radiology at S.U.I., has reported in an article in the May, 1955, issue of RADIOLOGY.

The treatment employed in the 100 cases covered in Dr. Kerr's study was a combination of surgery and irradiation. "Experience indicates . . . that it is practically impossible to sterilize any except the smallest of neoplasms with radioactive material alone," he stated. "We have therefore resorted to surgical removal of the tumor before or after interstitial injection of the Au^{198}."

Continuing, he said, "A study of these cases indicates that rectal complications can be eliminated by careful usage of the radioactive material, with only one significant complication remaining, i.e., calculus formation in the sloughing tissue."

Of the first 100 patients followed from 24 to 39 months, 46 were alive, 18 with disease and 28 without. That is, 28 per cent had no clinical evidence of neoplasm over a period of observation of at least 24 months. At least 13 had died from causes other than carcinoma. "Since all of these patients would eventually die of cancer if treated palliatively, it seems worth while to continue this method in an effort to save some," Dr. Kerr concluded.

MORBIDITY REPORT

Disease	*June 1955*	*May 1955*	*June 1954*	*Most cases reported from these counties:*
Diphtheria	0	1	0	.....
Scarlet Fever	25	50	125	Clinton, Des Moines, Johnson
Typhoid Fever	2	2	1	Jackson 2
Smallpox	0	0	0	.....
Measles	467	1018	2627	Black Hawk, Buena Vista, Scott, Story
Whooping Cough	69	94	26	Scott, Story
Brucellosis	21	22	23	Cedar, Keokuk, Plymouth, others scattered 1 to a county
Chickenpox	142	241	413	Boone, Pottawattamie, Scott
Meningococcus Meningitis	0	3	7	.....
Mumps	250	645	980	Dubuque, Johnson, Pottawattamie
Poliomyelitis	13	16	26	Sac 2, Woodbury 2, others scattered 1 to a county
Infectious Hepatitis	48	102	325	Black Hawk, Webster
Rabies in Animals	17	18	35	Cedar, Muscatine, Polk, Scott, others scattered 1 to a county
Histoplasmosis	1	-	-	Des Moines
Malaria	3	-	-	Black Hawk, Linn, Johnson 1 each (Veterans, Foreign Service)
Tularemia	1	-	-	Polk
Tuberculosis	34	33	46	For the State
Syphilis	76	98	104	For the State
Gonorrhea	41	44	47	For the State

WOMAN'S AUXILIARY NEWS

Mrs. Edw. B. Hoeven, *Woman's Editor*
224 East AltaVista, Ottumwa

Mrs. Wilson Wolfe, *Asst. Woman's Editor*
N.E. Elm Street, Ottumwa

LINES FROM THE PRESIDENT

Dear Members and Friends:

One of the great joys of attending a meeting such as the Auxiliary's National Convention, in Atlantic City, is the renewing of old friendships and the acquisition of new friends. As the eighteenth-century dictionary maker Samuel Johnson said, "If a man does not make new acquaintances as he passes through life, he will soon find himself alone. A man should keep his friendships in constant repair." The whole atmosphere of the convention was one of congeniality and friendship.

Monday morning found Dr. Flynn and me up early and down to register at our respective meetings. Pre-meeting Auxiliary activities included a tea on Monday afternoon in honor of the president, Mrs. Mason G. Lawson, of Little Rock, in the Rutland Room of Hotel Haddon Hall, at which I was a guest of the Woman's Auxiliary of the Medical Society of New Jersey.

"The People Defeat Polio" was the subject of an address given by Mrs. Beatrice Wright Fuerst, assistant director of women's activities for the National Foundation for Infantile Paralysis, at the Tuesday luncheon. One of her remarks was that our Woman's Auxiliary has become a force for good in our national life. As regards the health field in which she is most interested, she said, "You have helped fight poliomyelitis, and we thank you for your inspiration, interest, courage and steadfast support. The people of the country look to you for leadership." She praised the Salk vaccine and said that problems are being worked out by competent people and will be solved. No vaccination program can prevent every person from contracting a disease, she reminded her audience. We must, nevertheless, encourage and persuade parents to have their children vaccinated.

It was my privilege on Tuesday evening to attend the inauguration of Dr. Elmer Hess, a noted urologist of Erie, Pennsylvania, as president of the AMA. In his inaugural address, Dr. Hess said: "We must allay fear, inspire confidence and strengthen the patient's determination to get well. Unless we are willing to give of ourselves and our faith, our science will avail us little." He disavowed all prejudice by declaring, "I care not for a doctor's creed; I care not for his race; but I care much for his belief and his demonstration of that belief by his loving, tender kindness when he is called upon to alleviate human suffering."

Dr. Hess said he intends, during the coming year, to lead the nation's physicians in a campaign to overcome the ravages of mental illness and to eliminate the needless bloodshed that is being caused by traffic accidents. "Mental and emotional illness is one of the greatest medical problems in the United States," he declared. "And I think mental illness becomes automatically a concern of all practicing physicians, not just of the psychiatrists."

Dr. Norman Vincent Peale, one of the nation's foremost clergymen, shared the limelight with Dr. Hess. In a most stimulating and inspiring address on "Medicine's Proclamation of Faith," he declared his conviction that the physician who treats and God who heals cooperate in a process no less religious than the cure of souls, in which God and the pastor are coworkers.

"The physician is surely one of the most beloved figures in America," Dr. Peale continued. The confidence which people have in their doctor, the way in which they look to him for deliverance from pain and fear, and the love with which they accept him make membership in the medical profession one of the highest of privileges. Dr. Peale expressed the high regard in which his own profession holds doctors when he concluded: "The clergyman, who himself is intimately associated with men, women and little children in the deep experiences of their lives, salutes with esteem those great servants of God, the doctors of America."

Many other highly inspirational reports were given on succeeding days, and I shall send a résumé of them to chairmen of the state Auxiliary's committees. Members who subscribe to the BULLETIN—and all of you would benefit from subscribing—can read accounts of them there.

Mrs. Lester Hegg, your immediate past president, accepted the recognition given to Iowa for "exceeding 100 per cent" in subscriptions to TODAY'S HEALTH. Let's say "Thank you" to Mrs. Ralph Moe, of Griswold, who, more than anyone else, was responsible for that accomplishment, and let's all help her this next year *in surpassing that record.* Let's see to it that every Auxiliary member subscribes and gives a gift subscription this next year. With a little effort, we can make our record "200 per cent."

Dr. Walter B. Martin, retiring president of the AMA, speaking at the luncheon on Wednesday, pointed up the obligations of doctors to bring the best that Medicine can offer to the individual patient. He expressed appreciation for the fine work the Auxiliary has done and of Mrs. Turner's efforts in behalf of the Auxiliary and of Medicine as a whole. Dr. George Hull presented American Medical Education Foundation awards, but unfortunately Iowa's Auxiliary was not among the honored. As a whole, the Woman's Auxiliary to the AMA donated $80,000 this past year to the AMEF.

I was the recipient of a beautiful white gardenia corsage on Wednesday morning. I wish to thank the delegates present in Atlantic City who gave it to me and the state Auxiliary members in whose behalf it was presented.

The highlight of Thursday's session was the beautiful installation service. In her inaugural address, Mrs. Lawson described the role of the doctor's wife when she said, "American medicine has honored us by allowing us to serve its cause through its Auxiliary, an organization founded on man's need for woman's services." By way of elaboration, she said, "Since we are of one heart and mind with our physician husbands, we must assume the responsibility of active health leadership, which they and the community have every right to expect of us."

Mrs. Robert Flanders, of Manchester, New Hampshire, was chosen to serve as president-elect.

The most inspirational of all the meetings that I attended—and I was present at all of them—was the post-convention conference, which lasted throughout Friday. Copies of the notes that I took at those sessions will be sent to committee chairmen.

Our new national president's goals:

1. Active leadership in community health

2. Survey of physicians to determine number of hours they are donating to public service

3. Redoubled efforts for contributions to AMEF (The national Auxiliary's goal for next year is $100,000. The "80 Dimes Campaign" will encourage everyone to give a dime for each medical school.)

4. Support for good legislation

5. Ten per cent of doctors' wives engaged in civil defense activities

6. Continued support for Future Nurses clubs.

7. A BULLETIN in the hands of every member

I should like to tender a special "Thank you" to the delegates from Iowa who attended the convention with me. For what we didn't have in quantity, we made up in quality. It was intensive and fatiguing, but a lot of fun, too!

MRS. CHARLES H. FLYNN
President

AUXILIARY MEMBERS AT ATLANTIC CITY MEETING



On the near side of the table are, from left to right: Mrs. H. H. Fesler, St. Paul, Minn.; Mrs. C. L. Sheedy, Austin, Minn.; Mrs. Lester Hegg, Rock Valley.
On the far side of the table are, from left to right: Mrs. Patrick H. DeCanio, Bayside, New Jersey; Mrs. Charles McArthur, Olympia, Washington; Mrs. Edw. B. Hoeven, Ottumwa; Mrs. Charles Flynn, Clarinda; Mrs. H. J. Corper, Denver; Mrs. J. G. Ryan, Denver and Mrs. L. A. Coffin, Farmington.

NEWS AND VIEWS

We of the WOMAN'S AUXILIARY NEWS editorial staff find it challenging to follow Mrs. K. M. Chapler, who has been so successful in the same sort of work during the past 13 years. Our job will not be easy, but if you will do *your* part in keeping us supplied with news of your activities, we'll try to measure up.

Please mail your reports and items to us on the first of each month. The seventh is the absolute deadline for us. With your cooperation, we shan't be compelled to "run scared," looking over our shoulders at a deadline that is about to overtake us.

Page County regrets losing Mrs. R. A. Bunting as a member from Shenandoah. She is an opera singer with the Omaha Symphony, and Dr. Bunting is taking a residency in surgery at Omaha.

Look for an article in a future issue of TODAY'S HEALTH by Mrs. John Read Arthur, chairman of the Clarinda chapter of the Red Cross Grey Ladies. The article tells about the inspiring work of her group at the Clarinda Mental Health Institute.

Wapello County welcomes Dr. and Mrs. Wm. Ireland and baby from Chicago. Dr. Ireland just completed his residency in radiology at Illinois Research Hospital, and is to be associated with Drs. S. F. Singer and R. A. Hastings.

Here is a man! Dr. C. B. Taylor, of Upland, California, 87 years young, need have no personal concern with the progress of the science of geriatrics. He recently returned to his home in California after a visit with his son and daughter in law, Dr. and Mrs. L. A. Taylor, in Ottumwa. While here, he drove to many parts of Iowa looking up old friends and/or their descendants.

C. B., as he is known to his friends, had the good sense to retire in 1935 at an age when he still could live a full, rich life in a new environment. And he has done just that.

Congratulations to him, and may he have many more full years!

Dr. L. H. McDaniel, of Tyronza, Arkansas, chairman of the AMA Section on General Practice, wasn't aware that he was making news when he opened his meeting at Atlantic City by venturing a few predictions regarding the future of Medicine. But his forecasts—that a decrease in the incidence of mental illness is on the way, that insulin will be available in tablet form, that transplanting of vital organs such as the heart, kidneys, pancreas and lungs will be made possible, and that synthetic vitamins and foodstuffs will be developed to prevent famines and starvation—were picked up and reported in newspapers throughout the world.

In a letter that he wrote afterwards to Dr. George F. Lull, secretary-general manager of the AMA, Dr. McDaniel said: "I have received clippings and comments from all over the world—several hundreds of them in fact; some from London, one from Zurich, Switzerland, and one from Hong Kong, China, in Chinese. Arthur Godfrey gave my talk 15 minutes on his T-V program; so did Warren Hull and so did Garry Moore. Had many letters from overseas GI's, who heard it on an overseas broadcast. About two per cent of my letters are from religious cranks who accuse me of sin in suggesting that man will live beyond the three score and ten. Another two per cent vilify me as a spokesman of 'the cruel medical trust.' Then another one per cent have some pet formula or elixir of life and want me to go into partnership with them—they would furnish the brains and I the publicity. About five per cent are dubious, but hopeful. The highest percentage of letters was very complimentary not only of me but the medical profession as well."

The delegates and members from Iowa who attended the national convention at Atlantic City included Mrs. C. H. Flynn, of Clarinda; Mrs. Lester Hegg, Rock Valley; Mrs. Edw. Hoeven, Ottumwa; Mrs. Robert Mason, Des Moines; Mrs. Robert Larimer, Sioux City; Mrs. L. A. Coffin, Farmington; Mrs. Harold Peggs, Creston; Mrs. E. A. Vorisek, Des Moines; Mrs. Don Ward, Dubuque; and Mrs. C. H. Stark, Cedar Rapids. Dr. and Mrs. Flynn combined a vacation with their trip to the convention, going by way of Duluth, Mackinac Island, Sault Ste. Marie and Niagara Falls. Their daughter Gail is spending the summer working at a resort in Minnesota.

"Flame in the Stubble" is the title of a newly published novel by Mrs. E. B. Hoeven, of Ottumwa. It is a story about a doctor's wife, and since it also concerns the heroine's husband, his medical colleagues and their interrelations, it is somewhat controversial.

There is a marked trend by Auxiliaries to make use of educational media in study groups, committee meetings, etc. More officers are reading the AMA JOURNAL than ever before, and they are also keeping up with the AMA SECRETARY'S

LETTER and the WASHINGTON REPORT, in order that they may pass on the information to their fellow members in capsule form. Legislative education is cooperated in by 86 per cent of the states.

On June 15, the following officers of the Woman's Auxiliary to the Wright County Medical Society were installed by Mrs. A. E. Acher, of Fort Dodge: Mrs. J. R. Christensen, president; Mrs. Arlo Pitcher, vice-president; Mrs. B. L. Basinger, secretary; and Mrs. R. Smith, treasurer.

Iowa's delegates to the national convention of the Auxiliary at Atlantic City were concerned to discover that names of Iowa's deceased members, through an oversight somewhere, had not been included in the memorial service conducted by Mrs. W. C. Wiginton.

To prevent anything of the sort from happening again, county presidents and press chairmen are urged to send the names of deceased members to Mrs. A. O. Wirsig, of Shenandoah, the Courtesy Chairman, as promptly as possible. She will keep the record, and also will send cards of sympathy to the bereaved families.

News and pictures of interest to the Auxiliary should be mailed to Mrs. Homer Wichern, chairman of Press and Publicity, 3717 Forest Avenue, Des Moines 11. From those materials, she prepares a scrapbook of Auxiliary activities for the year.

BRIEFING CONFERENCES

Mrs. Charles Flynn, state president, plans to hold four regional conferences in the fall for the purpose of instructing and advising officers of county Auxiliaries. Also, she is anxious to learn of local plans and problems.

Chapters that would like to be hosts at such meetings are invited to write to Mrs. Flynn.

RED CROSS SERIES ON AMES TV STATION

A first, broad-scale effort to teach home nursing over television will be offered jointly by WOI-TV, the Iowa State College station in Ames, Iowa, and the Red Cross in a series of programs beginning in September. The training schedule begins September 27 and will continue through November 15, with half-hour shows (1-1:30 p.m.) Tuesdays and Thursdays.

A drastic need for private citizens to learn home nursing has prompted the Red Cross to offer this training series. The need stems from the nationwide shortage of medical services, now being made additionally serious by the aging of the population. The lesson topics are to cover 32 basic nursing skills, and the teaching aids will be a Red Cross nursing textbook and a civil defense guide.

The series is an outgrowth of an educational experiment last year conducted in the Southwest, during which 600 homemakers participated.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa

Thursday at 11:15 a.m.

"HEART OF AMERICA"

August 4 ..... Stresses and Strains
August 11 ..... Rehabilitation
August 18 ..... Protecting the Good Heart
August 25 How to Live With a Damaged Heart

WSUI—Iowa City, Iowa

Tuesday at 11:45 a.m.

"THE STORY BEHIND THE DISCOVERY"

August 2 ..... A Blow to the Heart
August 9 ..... The Lucky Accident
August 16 ..... Two Mad Dogs
August 23 ..... The Bright Red Miracle

"HEART OF AMERICA"

August 30 ..... Research

TELEVISION

KCRG-TV—Cedar Rapids, Iowa

Tuesday at 6:30 p.m.

August 2 ..... Rehabilitation
August 9 ..... Facts and Misconceptions About Psychiatry
August 16 ..... Alcoholism
August 23 ..... Pharmacy
August 30 ..... Cancer Detection

KGLO-TV—Mason City, Iowa

Thursday at 3:30 p.m.

August 4 ..... Nursing
August 11 ..... Radiology
August 18 ..... Gerontology
August 25 ..... Varicose Veins

KTIV-TV—Sioux City, Iowa

Sunday at 3:30 p.m.

August 7 ..... Rehabilitation
August 14 .... Facts and Misconceptions About Psychiatry
August 21 ..... Alcoholism
August 28 ..... Pharmacy

A RISK OF HEAVY EARRINGS

Clipping earrings to the ear lobes—instead of slipping them through holes bored in the lobes—may appear less "barbarous" and less risky. But, without reasonable care and caution, the current trend toward heavy earrings with correspondingly powerful spring clips may lead to an increasing number of cleft lobes.

No previous case of cleft lobes caused by earring clips has been reported. Recently, however, within a few months, two cases were seen in a British hospital.

Strong clips apparently cause a relatively painless pressure necrosis of the soft tissues of the lobes. In the case of a girl aged 19, a marked deformity developed. Since the age of 14, this girl had been wearing clip-on earrings. Splitting of the lobes had started at the tips. Because she has very little pain or bleeding, she kept on wearing the earrings for many months, even though the progressing deformity caused her great psychological distress. Another patient, aged 26, had been wearing spring clip-on earrings for more than eight years. Her trouble, present for five years, began as a small hole at the point of maximal spring pressure. To hide the holes, she persisted in wearing the earrings. The size of the holes increased until complete clefts had developed.

The risks of pierced lobes—the accepted device for attaching earrings until the end of the last century—are easier to understand. Tearing by sudden traction obviously may cause cleft of the lobe. Two cases of this kind have been reported.

From an article by L. R. McLaren, BRIT. J. PLAST. SURG., 7:162, (July) 1954, abstracted for the Abbott Labs. quarterly WHAT'S NEW, Spring, 1955, p.4.

PSYCHOSOMATIC PROBLEMS

The University of Minnesota announces a continuation course in office psychotherapy in psychosomatic problems from September 7-9, 1955, to be held at Douglas Lodge, Itaska Park. The therapeutic management of psychosomatic patients will be the central theme, and the technics of value to the general physician and the non-psychiatric specialist will be emphasized. The faculty will be drawn from the University of Minnesota Medical School and the Mayo Foundation.

Sessions will be arranged to permit time for fishing and other recreational activities. The fee will be $130, which will include registration, tuition, meals and lodging, instructional material, transportation to and from Douglas Lodge, and fishing license. Further information can be obtained from the Director of Continuation Medical Education, 1342 Mayo Memorial, University of Minnesota, Minneapolis 14.

A NEW PHILANTHROPY IN WISCONSIN

During its recent annual meeting, the House of Delegates of the Wisconsin State Medical Society set up a trust to be known as Educational and Scientific Foundation, Inc., for which annual donations will be solicited from the physicians of that state.

The purposes for which the money will be used apparently have not been fully decided upon. An editorial in the June, 1955, WISCONSIN MEDICAL JOURNAL suggested that parts of it might be employed in finding solutions for "many puzzling scientific and economic questions arising out of modern medical practice," such as the effect on public health of new drugs and scientific technics. Studies of maternal and infant mortality in Wisconsin, grants for disabled physicians or for the widows of physicians, grants to aid member physicians in specific research projects, and annual contributions to the American Medical Education Foundation are some of the other ways in which the funds may be disbursed.

TWILIGHT OF THE WAITING ROOM

In his idea-packed book,* Jim Bryan suggests that the doctor never refer to his reception room as a "waiting room" and that he never allow anyone else to use that term.

We think that he is right. After all, *waiting room* suggests something passive: the patient waits; he sits; he is forgotten. It conjures images of cold, poorly lighted rural railway stations. By contrast, *reception room* suggests something active. Here something is done to and for the patient. He is received. To put it another way, he is welcomed. The phrase *reception room* has an aura of elegance about it.

As the idea of an "appointment" practice (for GP's as well as specialists) catches on, there will be less use for this room anyway. When it must remain, it could approximate the living room where your guest waits while your wife puts on those last and mysterious finishing touches. Maybe if we all thought of those spaces as "reception rooms," we'd begin to look at them with more critical eyes. The light, the heat, the decor, the reading matter, the spaciousness, the friendly arrangement of chairs—all this goes into good "reception." Whether as an actual room or only as a word, the "waiting room" could well be retired from active duty. Let patients no longer just wait. By all means, let them be received. Maybe we ought to go the whole way and call it a "welcome room."

—Editorial in the JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY, 52:288, (June) 1955.

* Bryan, James E.: PUBLIC RELATIONS IN MEDICAL PRACTICE. Baltimore, The Williams & Wilkins Co., 1955.

BLUE CROSS



BLUE SHIELD

Blue Shield Develops New Claim Form

Doctor, you will be pleased with Blue Shield's new Doctor's Service Report. It will help you in several ways:

1. *It will save time for you,* for it is a simplified version of the report that you have been submitting.

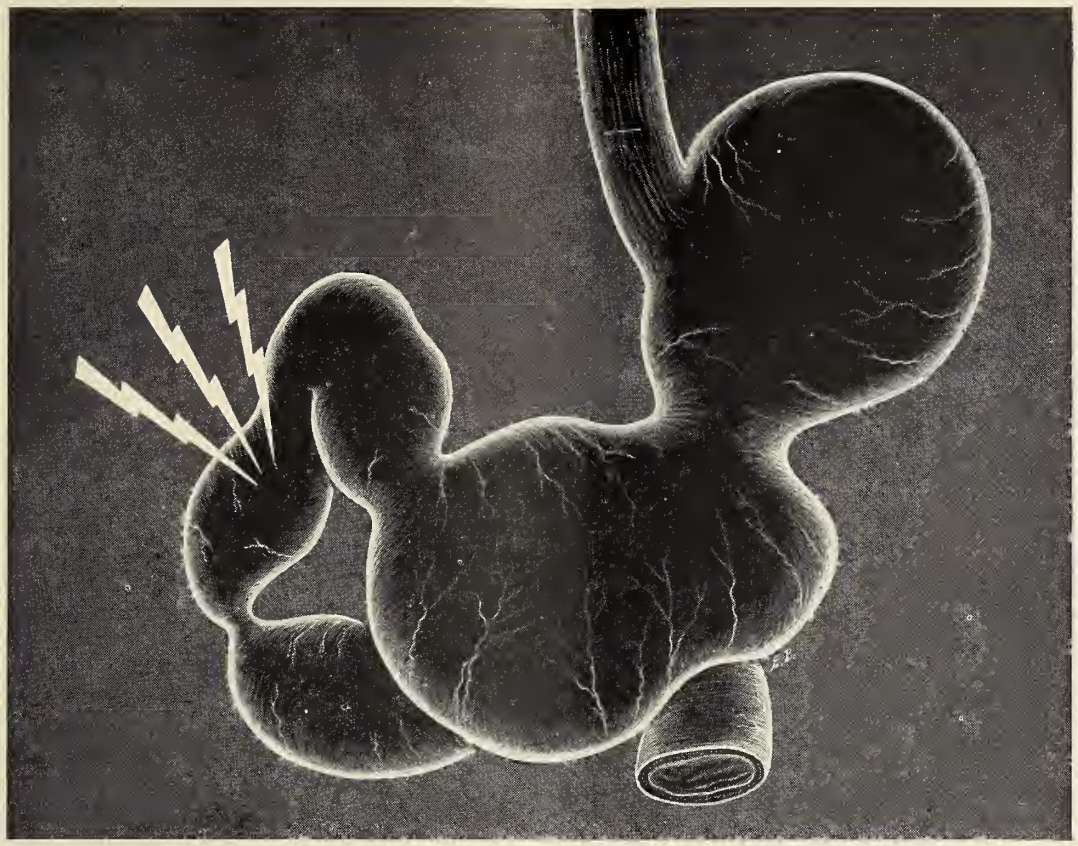
2. *It will provide a copy for you* with only one typing operation. Your copy can be used as an accounting control against the semi-monthly checks that you receive from Blue Shield. Thus, you are provided an excellent follow-up system.

3. *It will assist you in your financial dealings with your patient.* Blue Shield will mail the subscriber's copy of the "snap-out" form when liability has been established. Thus, the patient will be less likely to bother your secretary relative to the Blue Shield allowance.

4. *It contains spaces for the use of standard nomenclature* in your description of services rendered. (If you wish to use the back of the form in requesting special consideration, please remember that carbons must be reversed.)

Ask your secretary to drop a postcard to Iowa Medical Service specifying the number of new Doctor's Service Report forms that will furnish you a three months' supply. They will be shipped immediately upon receipt of that request.

PRO-BANTHĪNE FOR ANTICHOLINERGIC ACTION



Abnormal Motility as the Cause of Ulcer Pain

Until recently the general opinion was held that ulcer pain was primarily caused by the presence of hydrochloric acid on the surface of the ulcer.

Present investigations[1,2] on the relationship of acidity and muscular activity to ulcer pain have led to the following concept of its etiologic factor:

"... abnormal motility[2] is the fundamental mechanism through which ulcer pain is produced. For the production and perception of ulcer pain there must be, one, a stimulus, HCl or others less well understood; two, an intact motor nerve supply to the stomach and duodenum; three, altered gastro-duodenal motility; and four, an intact sensory pathway to the cerebral cortex."

Pro-Banthīne® has been demonstrated consistently to reduce hypermotility of the stomach and intestinal tract and in most instances also to reduce gastric acidity. Dramatic remissions[1] in peptic ulcer have followed Pro-Banthine therapy. These remissions (or possible cures) were established not only on the basis of the disappearance of pain and increased subjective well-being but also on roentgenologic evidence.

Pro-Banthine Bromide (Beta-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) has other fields of usefulness, particularly in those in which vagotonia or parasympathotonia is present. These conditions include hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm.

1. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

2. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

SEARLE

WE CORDIALLY INVITE YOUR INQUIRY for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your eligible dependents.



SINCE 1902

ALL PREMIUMS COME FROM

PHYSICIANS SURGEONS DENTISTS

ALL BENEFITS GO TO

$4,500,000 ASSETS
$22,500,000 PAID FOR BENEFITS

PHYSICIANS CASUALTY AND HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

The Month in Washington

Washington, D. C.—For more than a year the administration has been attempting to work out a system of voluntary, contributory health insurance for Uncle Sam's two million or so civilian employees and their families. It would seem a simple thing to arrange, considering that most big employers have had similar plans in operation for years. At any rate, the plan is ready now for Congress to act on, but putting it together hasn't been easy.

First, there was the question of how to fit in the many already existing health insurance plans (some conducted by U. S. employee unions), and at the same time to offer coverage to government people working and living where no adequate insurance is being offered.

Also, there was wide disagreement as to how much of the premium the federal government should pay. In private industry, employers' contributions range from a small percentage to the entire cost. U. S. employee unions naturally thought the federal government should set an example in generosity.

The program was first outlined early in the year. It then was put on the shelf for two reasons: a few refinements had to be made, and Congress first had to decide how big a pay raise it was going to allow U. S. workers this year before thinking about a fringe benefit such as health insurance. The whole program was sent to House and Senate just at the start of the adjournment rush, with the realization that not much could be hoped for this session.

The plan offers U. S. employees the option of signing up with a local non-profit service or indemnity plan, provided that 75 per cent of the workers in the particular operation vote for a particular plan and provided that the plan is approved by the U. S. Civil Service Commission. If the employees can't get together, or if no adequate plan is available locally, they can sign up for a uniform national indemnity plan to be underwritten by one or more large national insurance companies and negotiated by the Civil Service Commission. The proposed law itself lists specificially the original benefits that must be provided by the uniform plan, but authorizes the Commission to readjust them.

Regardless which type coverage the employee selects for himself and his family, the federal contribution would be figured the same way. It could not exceed one third of the total premium, or $19.50 annually for a single person or $52 for one with dependents, whichever figure is the lesser. If the uniform plan is chosen, the single employee could not be charged more than $39 annually, or the one with dependents more than

$108 annually. But under any other plan, the employee would pay the difference between the U. S. contribution and the premium cost.

A system of major medical cost or catastrophic insurance also would be provided. Under it the employee would have to pay the first $100 of cost, after benefits of the basic policy had been exhausted, before major medical cost benefits would become available. From that point on, until $10,000 had been paid by the company, the employee would have to pay only 25 per cent.

* * *

The first major medical bill enacted was the extension for another two years of the doctor draft act, which for five years has been furnishing the Armed Forces and the Public Health Service with most of their doctors. Before passage, two changes were made in the law. The maximum age for induction was dropped five years. Under the old law a man could not be taken against his wishes after he had reached his fifty-first birthday; the new law reduced it to his forty-sixth birthday. Also, the law no longer applies to physicians and dentists who have reached their thirty-fifth birthdays and who have been rejected for a medical or dental commission at any time solely on the grounds of physical condition.

Defense Department points out that the man has to be able to demonstrate that he actually applied for a medical or dental commission and was rejected. A 4-F draft board classification is not sufficient. The Department also said that the law will not result in the discharge of men already in uniform, even though they could not be inducted under the new law.

As adjournment approached, prospects were that not much more medical legislation would be enacted this session. Most likely of success was a proposal for U. S. grants to states to help finance Salk vaccine costs. The states would decide the priority of age groups, but in a public program there could be no "means test" to determine whether a family could afford to pay. Under this plan, the states would receive a certain amount as a straight grant, based on the state's economic need and the number of uninoculated children. If they wanted to put up dollar for dollar, the states also could draw on a second account. The bill does not set any limit on U. S. appropriations.

Two other possibilities were bills for a national survey of mental illness (which passed the House early in the session), and for U. S. grants to medical schools.

INTER-SOCIETY CYTOLOGY COUNCIL

The third annual meeting of the Inter-Society Cytology Council will be held at the Statler Hotel, Cleveland, November 11 and 12.

The morning and afternoon sessions will com-

METICORTEN
PREDNISONE
Schering
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates—1955

SURGERY—Surgical Technic, Two Weeks, August 8, September 12 and 26
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, October 17
Surgical Anatomy & Clinical Surgery, Two Weeks, August 22
Surgery of Colon & Rectum, One Week, September 19
General Surgery, Two Weeks, October 3; One Week, October 17
Gallbladder Surgery, Ten Hours, October 24
Thoracic Surgery, One Week, October 3
Esophageal Surgery, One Week, October 10
Basic Principles in General Surgery, Two Weeks, September 26
Fractures & Traumatic Surgery, Two Weeks, October 17
GYNECOLOGY & OBSTETRICS—Vaginal Approach to Pelvic Surgery, One Week, November 7
Three-Week Combined Course Gynecology & Obstetrics September 12
MEDICINE—Two-Week Course September 26
Electrocardiography & Heart Disease, Two Weeks, October 10
Gastroscopy, One Week Advanced Course, September 12
Gastroenterology, Two Weeks, October 24
Dermatology, Two Weeks, October 17
RADIOLOGY—Clinical and Didactic Course, Two Weeks, October 3
Clinical Uses of Radioisotopes, Two Weeks, October 10
PEDIATRICS—Clinical Course, Two Weeks, by appointment
Pediatric Cardiology, One Week, October 10 and 17
UROLOGY—Two-Week Course October 10

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

WE ARE PLEASED TO OFFER TO THE DOCTORS OF IOWA

COURTESY DISCOUNT CARDS

Please Write or Phone 3-8049

We'll be happy to mail your card to your office or home.

Bernie's

"IOWA'S BIGGEST LITTLE APPLIANCE STORE"

Nationally Known Air Conditioners, Radios, T.V., Freezers, Refrigerators, Vacuum Cleaners, Etc.

218 West 2nd Des Moines, Iowa

prise sixteen formal papers and nine roundtable discussions of cytologic problems. A symposium on the subject "Problems of Early Endometrial Cancer" will be presented.

The annual banquet will be held on Friday evening, and the business meeting on Saturday at 12:30 p.m.

Additional information may be obtained from the secretary-treasurer, 634 North Grand Avenue, St. Louis 3.

POSTGRADUATE ASSEMBLY ON ENDOCRINOLOGY

Endocrinology and metabolism will be the subject of the seventh annual postgraduate assembly of the Endocrine Society, which is to be held in Indianapolis September 26-October 1, in cooperation with the Indiana University School of Medicine. Twenty-one leading clinicians and investigators will be heard.

Information regarding the program, registration, etc. is available from the Postgraduate Office, Indiana University School of Medicine, 1100 West Michigan, Indianapolis 4.

MINNESOTA SYMPOSIUM ON ARTERIOSCLEROSIS

At the Minnesota Symposium on Arteriosclerosis, to be held September 7-9 at the Mayo Memorial Building on the campus of the University of Minnesota under the sponsorship of the University and the Minnesota Heart Association, there will be five general sessions and a half-day of clinic and laboratory visits devoted to "The Challenge of Arteriosclerosis," "Atherosclerosis," "Peripheral and Cerebral Arteriosclerosis," "The Internist and Some Tools," and "The Surgical Treatment of Arteriosclerosis."

Speakers from outside Minnesota will include Dr. E. Cowles Andrus (Baltimore), C. B. Anfinson (Bethesda, Md.), Henry T. Bahnson (Baltimore), David P. Barr (New York), John F. Brock (Cape Town, South Africa), A. W. Duryee (New York), Miller Fisher (Boston), Charles A. Hufnagel (Washington, D. C.), Louis N. Katz (Chicago), Lena Lewis (Cleveland), Haqvin Malmros (Lund, Sweden), G. C. McMillan (Montreal), Elliot V. Newman (Nashville), M. F. Oliver (Edinburgh), Irvine H. Page (Cleveland), T. Posteli (Bologna), Henry I. Russek (New York), Lester R. Sauvage (Seattle), Wm. R. Scarborough (Baltimore), William P. Shepard (New York), Harris B. Shumaker, Jr. (Indianapolis), William B. Wartman (Chicago), James Watt (Bethesda, Md.), Edwin J. Wylie (Nürnberg), and Paul Dudley White (Boston).

For information, reservations, housing, etc., physicians should address Dr. Robert B. Howard, Mayo Memorial, Minneapolis 14. Advance registration is desirable.

"Premarin" relieves menopausal symptoms with virtually no side effects, and imparts a highly gratifying "sense of well-being."

"Premarin"®—Conjugated Estrogens (equine)

5511

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective • Available in 5 mg. tablets in bottles of 30 and 100 • Usual dosage is ½ to 1 tablet three or four times daily

Deltasone*

requires only 1/5 the dose of cortisone

*Trademark for the Upjohn brand of prednisone (delta-l-cortisone)

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

PERSONALS

Dr. Robert M. Johnson, of Des Moines, has begun a residency in surgery at the V-A Hospital there.

On August 16, **Dr. and Mrs. J. J. Keith**, of Marion, will arrive in New York, returning from a two-month trip through Europe.

Dr. Richard A. Bunting, who has been associated in practice with **Dr. John R. Eisenach** at Shenandoah for the past year, has undertaken a four-year residency in surgery at the V-A Hospital in Omaha.

Dr. L. A. Coffin, president of the Iowa State Medical Society, and Mrs. Coffin went on an eight-day cruise to the Bahamas and Bermuda after attending the AMA convention at Atlantic City in June.

On June 1, **Dr. Gerhard Grundberg** took over the practice which **Dr. G. E. Schnug** had conducted at Dows for the past 45 years. Dr. Grundberg received his medical education at Riga, Latvia, and Vienna, Austria, before the start of World War II. Since coming to this country in 1950, he has worked at the Woodward State Hospital and School, at Iowa Lutheran Hospital, Des Moines, and at the Clarinda Mental Health Institute. Dr. Schnug is retiring.

Dr. D. N. Bremner, a 1954 graduate of the SUI College of Medicine who interned at Broadlawns Polk County Hospital, Des Moines, began practice in Steamboat Rock early in July.

Dr. William W. Ireland, a radiologist who took both his M.D. degree and his residency training at the University of Illinois, has joined **Drs. S. F. Singer** and **Richard A. Hastings**, at Ottumwa.

Dr. D. H. Glenn, formerly a solo practitioner in Warsaw, Missouri, has associated himself with **Drs. D. M. Nyquist** and **J. J. Shurts**, at Eldora.

In mid-June, **Dr. R. A. Lynberg**, of Lake City, resigned as a staff member of the McVay Memorial Hospital, a proprietary institution there. He announced no future plans at that time.

Dr. and Mrs. D. R. Webb, of Oakdale, have recently made an extensive automobile trip through

the eastern parts of this country and Canada. Their first objective was Atlantic City, where Dr. Webb attended the annual meeting of the American College of Chest Physicians, June 1-5, and the most distant point in their travels was Yarmouth, Nova Scotia.

Returning to Iowa City from a field clinic for crippled children, **Dr. Carroll B. Larson,** head of the SUI orthopedics department, his son John and **Dr. Donald Delahanty,** an orthopedics resident, received only minor injuries in an automobile collision June 15. Dr. Larson's car, a 1955 station wagon, was damaged almost beyond repair, however.

Dr. Milford D. Hayden, of Marcus, left in July to begin a one-year residency at Lynn Hospital, in Detroit. He expects to resume his practice at this time next summer.

Two SUI men have recently been appointed to fill important posts in national medical affairs. They are **Dr. R. H. Flocks,** professor and head of urology, who was named chairman of the AMA Section on Urology, and **Dr. W. M. Fowler,** professor of internal medicine, who is to be one of the three representatives of the American College of Physicians on the Joint Commission on Accreditation of Hospitals.

Two Buchanan County physicians, **Drs. B. B. Sells,** of Independence, and **H. A. Housholder,** of Winthrop, celebrated the fiftieth anniversary of their entry into the medical profession on June 13. They graduated from the College of Medicine at SUI together in 1905, and both are now Life Members of the Iowa State Medical Society.

Dr. F. R. McFadden, Davenport obstetrician, reported on June 30 at the U. S. Naval Hospital at Corpus Christi, Texas, for active duty with the rank of lieutenant commander. During his absence, his practice will be carried on by **Dr. John J. Sullivan,** who has been located at Clinton. Dr. McFadden has been in Davenport since 1948.

Dr. M. J. Joynt, an EENT specialist at LeMars, was honored at a dinner June 14 at the Sacred Heart Hospital there. His brother, **Dr. Michael F. Joynt,** of Marcus, presented him the 50-year pin of the Iowa State Medical Society, and **Dr. R. J. Fisch** gave him a pen and pencil set on behalf of the Hospital staff.

Dr. Edward L. Emerson, of Muscatine, shot a two-over-par 72 to take both low gross and net honors in a tournament conducted at the Elmcrest Country Club, Cedar Rapids, on June 17. His handicap was nine strokes.

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York



KARO SYRUP SOLVES A SUMMER PROBLEM



Karo is the answer when other carbohydrate modifiers cause flatulence, colic, fermentation or allergy. It is bacteria free and hypoallergenic . . . produces no reactions. It is easily digested and assimilated by premature and newborn infants, well or sick.

Babies gain weight rapidly on Karo formulas. One ounce provides 120 calories of solid nutrition derived from dextrose, dextrins and maltose. The palatability of Karo encourages full feedings.

Karo mixes readily in all proportions with cow's milk, evaporated milk and water. Available at all grocery stores. Light or dark Karo Syrup may be used interchangeably in the formula.

The *foundation* of the individualized formula for 3 generations

CORN PRODUCTS REFINING COMPANY

17 Battery Place, New York 4, N.Y.

Dr. George R. Barnes, an assistant professor of pediatrics at SUI, succeeded **Dr. John C. MacQueen** as director of the State Services for Crippled Children on July 1, after serving for a year as assistant director. Dr. MacQueen will continue at the University with the responsibilities he has held there in the Department of Pediatrics.

Dr. and Mrs. R. L. Gorrell and their two children recently completed a two-month stay in Europe, during which Dr. Gorrell studied for some time in London. He practices in Clarion.

On June 9, **Dr. Felix Hach** left for Fort Sam Houston, Texas, to enter Army service as a captain. At the end of his two-year tour of duty, he plans to return to his practice in Ankeny.

Dr. I. H. Borts, director of the State Hygienic Laboratory at Iowa City, participated in a symposium on the role of microbiological laboratories in civil defense and participated in a meeting of the Association of State and Territorial Directors of Public Health, at Atlanta, Georgia, during June. On the same trip, he attended a meeting in Washington, D. C. of the National Serology Advisory Council, of which he is a member.

On June 30, **Dr. William A. Bockoven** terminated his association with **Dr. C. V. Hamilton**, at Garner, preparatory to entering upon a residency in psychiatry at Iowa City. Dr. Hamilton, at that time, was recuperating from an illness at a hospital in St. Paul, Minnesota, but expected to resume his practice soon.

Dr. Alfred W. Glaess, a board certified radiologist trained at Loyola University and Cook County Graduate School of Medicine, Chicago, began practice at hospitals in Clinton and De Witt, Iowa, and Savanna, Illinois, early in June. He has recently served 33 months in the Navy, assigned to U.S.P.H.S. work in and around Washington, D. C.

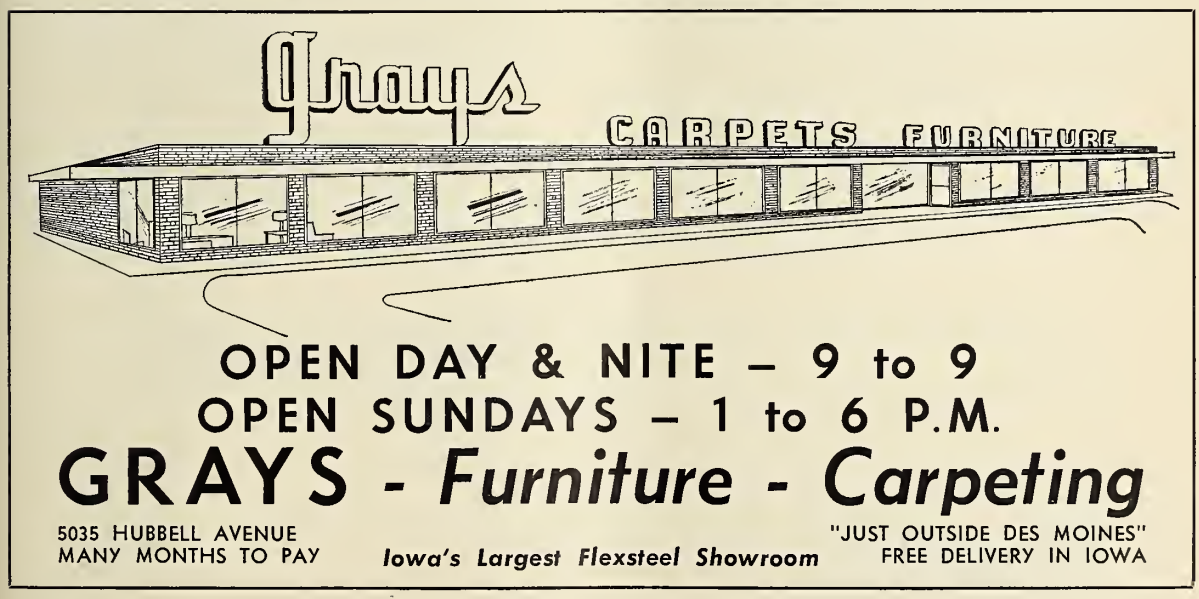
On July 1, **Dr. Ralph Duddles** left Scranton, where he had been associated with **Dr. R. E. Jongewaard**, to take a year's residency in surgery at Madera, California. Thereafter, he and his wife plan to enter foreign missionary work.

Dr. Clemmet W. Byrnes, of Dunlap, was hospitalized in Omaha on June 8 with a tubercular infection of the lung.

Dr. Thomas Robert Dolan, who has practiced in Anamosa since 1946, opened an office at Monticello on June 13.

Construction was begun in June on a $81,000 clinic building at Cherokee for **Drs. J. H. Wise, J. F. Lawlor** and **H. J. Fishman.** The new structure is to occupy the same site as the building in which they have had their offices, and for that reason, the new structure is to be built one half at a time, so that part of the old one can be used until half of the new one is ready. Dr. Wise's son, **Dr. J. K. Wise**, expects to join the group on completion of his Army service.

Dr. R. L. Miller, of Waterloo, was certified by the American Board of Obstetrics and Gynecology recently.



NEWS for every Doctor who smokes
for every patient who seeks smoking advice

NEW WATER-ACTIVATED FILTER REMOVES UP TO 92% OF NICOTINE, 76% OF TARS FROM ANY CIGARETTE, PLAIN OR FILTER-TIP*

Uses Oriental "Hookah" Technique to Cleanse, Cool Smoke, Leaving Full Tobacco Taste and Flavor

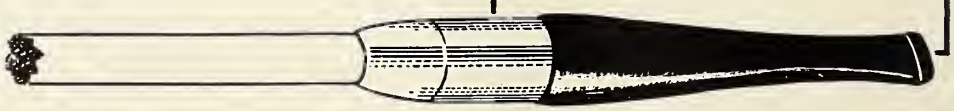
Aquafilter, the unique water-activated filter, offers a new, practical approach to the problem of how to limit and control nicotine and tar intake without reducing the pleasure of smoking.

HOW Aquafilter WASHES OUT NICOTINE AND TARS

The AQUAFILTER, a replaceable cartridge of absorbent material, holds about one milliliter of water—enough to trap three to four times its weight in nicotine. Acting as a miniature condenser, the AQUAFILTER chills gaseous nicotine to the liquid phase. At the same time it strips the smoke of tars.

The mainstream of smoke from the average king size cigarette, in tests conducted under standards established by the U. S. Government, shows only 8% of nicotine and 24% of tars passing through the AQUAFILTER. Temperature of smoke is lowered three to four times more effectively than by any other smoking method tested.*

*Independent testing laboratory reports available on request.



The AQUAFILTER will soon be available throughout the United States and Canada

Aquafilter CORPORATION • 270 Park Avenue • New York 17, N. Y.

Fire did about $6,500 worth of damage to the home and household furnishings of **Dr. F. W. Wilson,** in Sioux City, on June 13. No one was in the house when the blaze started.

Dr. James R. Thompson, of Waterloo, was one of the members of the SUI College of Medicine's Class of 1905, which was honored at Iowa City during commencement week this year.

Dr. Arthur Gelfand, of Sioux City, was robbed of a considerable sum of money on July 9, when as he was making a professional call bandits entered his patient's home in search of furs, jewelry and whatever else they could find.

Dr. James Christiansen, of Sioux City, who retired from medical practice several years ago, has remained active in Boy Scout work. Now in his thirty-third year in scouting, he is completing his seventeenth as physician at Camp Kellogg, in Stone Park.

Dr. M. E. Godbey, an EENT specialist, is now associated with **Drs. R. L. Feightner, H. L. Werner** and **H. B. Helling** in Mt. Pleasant, following two years' duty with the Air Force. Dr. Godbey had been in practice there before entering military service.

Dr. Charles Burr, a pediatrician, along with two children's dentists, **Drs. Dale Redig** and **Jerry Harvey,** have moved into a new office building at 5701 Hickman Road, Des Moines, the most notable features of which are a monkey cage containing three monkeys, and two aquariums filled with tropical fish. Dr. Burr purchased the livestock, but they are to be tended by a pet store proprietor.

Dr. G. M. Edvenson, who has been associated with **Dr. Arthur Burgess** at Iowa Falls, has announced that he will return to Chicago for further study in surgery. He has been maintaining the practice of **Dr. John Sear,** at Alden, and until Dr. Sear returns from military service, that town will be without a physician.

Dr. Gerald H. Evers, a recent graduate of the medical school at Creighton University, has joined **Dr. George J. McMillan** at Fort Madison.

Dr. Robert H. Nightengale reported for duty early in July as a staff physician at the Knoxville

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

V-A Hospital. He is a graduate of the Utah University medical school and has had a smiliar post at the V-A Hospital in Salt Lake City since June of last year.

Dr. John Byrne, a 1954 graduate of the school of medicine at Creighton University who interned at St. Joseph's Hospital, Omaha, has begun practice in Anamosa with **Dr. H. F. Dolan.**

Drs. Harry D. Harper, of Fort Madison, and **E. Thomas Scales,** of Des Moines, were two of the eleven people appointed by Governor Leo A. Hoegh to study discrimination in employment in Iowa.

A "health lodge" in memory of the late Ottumwa physician, **Dr. D. E. Graham** was presented to Boy Scout Camp Wapello by the doctor's widow on June 26.

Dr. A. M. Harwood has moved his practice from Sigourney to Waverly, where he is to be a member of the Rohlf Clinic.

Two pediatricians who entered military service together two years ago have returned to their separate practices in Iowa City. **Dr. John R. Maxwell** served at Fort Lewis, Washington, and **Dr. Kenneth J. Judiesch** was assistant post surgeon at Fort Sam Houston, Texas.

Dr. Kenneth L. Johnston, of Oskaloosa, underwent surgery in June at St. Luke's Hospital, Cedar Rapids.

Dr. Robert M. Blizzard, a resident in pediatrics at Raymond Blank Memorial Hospital for Children, Des Moines, has been awarded a fellowship at Johns Hopkins Hospital by the National Foundation for Infantile Paralysis. He and his wife left for Baltimore on June 21.

Dr. Charles R. Scholl, who has been associated with **Dr. G. A. Fry** at Vinton since last October, left there on July 1 to begin a residency in obstetrics at SUI.

Dr. John M. Wall, a pediatrician, has returned to practice at Boone following two years in the Air Force at Bryan, Texas. He was in Boone for four years before entering military service.

Drs. E. E. Lauvsted and **George I. Armitage** have set up an office by themselves in Osceola. Both formerly were associated with **Dr. C. R. Harken.**

SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 **Capacity 200 beds**

Under the Supervision of the Sisters of Mercy

An Institution for the Study and Treatment of Nervous and Mental Disorders.

Conditioned Reflex and Antabuse Therapy for Alcoholism

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director
JAMES D. MAHONEY, M.D., Associate Director **RICHARD B. LEANDER, M.D.**

Foot-so-Port Shoe Construction and its Relation to Center Line of Body Weight



1. The highest percent af sizes in the shoe business ore sald in Faat-so-Part shoes to the big men ond women who have faund that Faat-so-Port construction is the strongest, becouse . . . . . .

- The patented arch suppart constructian is guoronteed nat ta breok down.
- Speciol heels ore langer thon mast onatamic heels and maintoin the oppeoronce of narmol shoes.
- Insole extension ond wedge at inner corner af the heel where suppart is mast needed.
- Innersales ore guaranteed nat ta crack, curl, ar callopse. Insuloted by o speciol loyer of Texon which also cushians firmly ond uniformly.

2. Faot-so-Part losts were designed and the shoe construction engineered with the ossistonce of mony top arthapedic dactars. We invite the members of the medical profession ta wear a pair — prave to yourself these statements.

3. We make mare pairs of custam shaes far palia feet ond oll types af abnarmal feet thon any ather manufocturer.

FOOT-SO-PORT SHOES far Men, Women, Children

There is a **FOOT-SO-PORT** agency in oll leading towns and cities. Refer to your Classified Directory

Foot-so-Port Shoe Company, Oconomowoc, Wis.

PICKER X-RAY CORP. of Iowa

DAVENPORT DES MOINES
SIOUX CITY WATERLOO
OMAHA

SALES—SERVICE—SUPPLIES
X-RAY AND ELECTROMEDICAL EQUIPMENT

Picker x-ray OF IOWA

An Iowa Corporation To Serve the Profession of Iowa

J. K. DUNN, *Vice President*

Upjohn
KALAMAZOO

Indicated wherever oral cortisone or hydrocortisone is effective • Available in 5 mg. tablets in bottles of 30 and 100 • Usual dosage is ½ to 1 tablet three or four times daily

Delta-Cortef*

Fewer side effects at effective dosage levels

*Trademark for the Upjohn brand of prednisolone (delta-l-hydrocortisone)

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
223 Locust Street Telephone 2-6766
Des Moines 9, Iowa

The Neurological Hospital
2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for information
MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

Dr. Walter J. Kopsa, of Tipton, has been appointed coroner of Cedar County. He is the first physician ever to hold that office.

Dr. John Ware, a 1948 graduate of John Hopkins University school of medicine who has had three years of military medical service and four years of experience as a private practitioner, has been put in charge of the student health clinic of Cornell College, at Mt. Vernon.

At its June 24 meeting, the State Board of Education approved four appointments to the faculty of the SUI College of Medicine. **Dr. John MacLean Smith,** who was made an assistant professor of internal medicine, is a Scotchman who has held posts in six British and three American hospitals and research centers. **Dr. Gwilym Lodwick,** who was made an associate professor of radiology, has been chief of X-ray services at the Iowa City V-A Hospital. **Dr. Max Pepernik,** who was made an assistant professor of psychiatry, is a New Yorker who just finished two years of Air Force duty. And **Dr. William Prothro Jolly,** who is to be an instructor in internal medicine, is a graduate of the medical school at the University of Michigan and has been a resident at the SUI Hospitals this past year.

At the same time, the Board accepted the resignation of **Dr. Douglas W. Eastwood** from the Department of Surgery, and approved leaves of absence for **Dr. John M. Smith,** of the Department of Internal Medicine, who is to investigate certain aspects of infectious diseases, and **Dr. James A. Clifton,** who has accepted a fellowship with the U.S.P.H.S. and the National Cancer Institute and has been stationed in Watertown, Massachusetts.

Work was started during the last week in June on a clinic building for **Dr. W. E. Foley** and his two sons, **Dr. W. E. Foley, Jr.,** and **Dr. R. J. Foley,** opposite the entrance to Mercy Hospital in Davenport. It is to be completed before December 1.

In an address he delivered recently at a meeting of the Iowa City Kiwanis Club, **Dr. E. J. Boyd,** who has been pathologist at Mercy Hospital there, quoted some startling statistics showing the inefficiency of the existing coroner system in Iowa. Of the 25,681 deaths in the state last year, he reported that no more than 26 were identified as homicides, whereas comparisons with ratios in other states would have led one to expect no fewer than 126 to be recognized as murder. "Either there are unusual people in Iowa, or there are unreported murders," he concluded.

Dr. Boyd severed his connection with Mercy Hospital, Iowa City, on July 1, and has not announced what he plans next to do.

After four years of practice at Paton, **Dr. Chris Kerr** has closed his office there to undertake a residency in radiology at the Cleveland Clinic.

The Dubuque County Pharmaceutical Association entertained the physicians of the county at a picnic, June 30, at Bunker Hill.

On or about October 1, **Drs. M. G. Ericsson** and **George Bairnson** will occupy offices in a building at Cedar Falls which was recently vacated by the Northwestern Bell Telephone Company and which is being remodeled.

At Dubuque, thieves gained entrance to the office of **Dr. J. C. Kassmeyer** by prying open a rear door and to that of **Dr. Albert J. Entringer** through an unlocked transom on the night of July 1. Small amounts of money were stolen, but the principal loss resulted from the damage that was done to the nurses' desks.

A new office building is being constructed for **Dr. R. M. Johnson**, in Denison.

A 17-member advisory council to assist the State Health Department in allocating federal funds for hospitals and other health facilities has been named by Governor Leo A. Hoegh. The doctors of medicine chosen are **Dr. R. N. Larimer**, Sioux City (4-year term); **Dr. P. L. Spencer**, Essex (3-year term); **Dr. G. H. Ashline**, Keokuk (2-year term); and **Dr. C. N. Hyatt**, Humeston (1-year term).

Dr. Robert Murphy, an obstetrician and gynecologist who recently completed a residency at Grace Hospital, Detroit, has opened a practice in Fort Madison.

Dr. Ray G. Robinson, an SUI College of Medicine graduate who interned at Broadlawns Polk County Hospital, Des Moines, joined **Drs. B. M. Biersborn** and **C. R. Sokol** in practice at State Center on July 1.

Dr. Donald Ortmeyer has joined **Dr. John Faust** in practice at Manson. He interned at Broadlawns Polk County Hospital, Des Moines, following his graduation from the College of Medicine at SUI in 1954.

Two of the new doctors who began practice at Council Bluffs in July are **Dr. Kenneth Goebel**, a graduate of Creighton University school of medicine, who is associated with **Drs. E. B.** and **H. W. Mathiasen**, and **Dr. Francis Richardson**, a

50 and eight years

Treating Alcohol and Drug Addiction



RALPH CLINIC

Formerly The Ralph Sanitarium

A Department of the Benjamin Burroughs Ralph Foundation for Medical Research

Ralph Emerson Duncan, M.D., Medical Director.

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone Victor 3624

urologist who took his M.D. degree at the University of Illinois, did resident work at Iowa City, and now has joined the Council Bluffs Clinic.

Dr. Lawrence Porter has entered into an association with **Dr. C. A. Trueblood**, at Indianola. Dr. Porter is a graduate of the College of Medicine at SUI and recently completed his internship at Iowa Methodist Hospital, Des Moines.

Drs. Melvin R. Kelberg and **George W. Rowney**, Sioux City obstetricians and gynecologists, terminated their association on July 9.

Dr. Dennis J. Walter, a 1954 graduate of the College of Medicine at SUI who interned at Mercy Hospital, Des Moines, has opened an office in the Highland Park section of Des Moines.

Dr. Robert Allender, who recently completed a residency in obstetrics and gynecology at Iowa City, has joined **Dr. A. W. Brown** in Des Moines. Dr. Allender formerly practiced in Marion.

Dr. Aaron Randolph, a 1954 SUI College of Medicine graduate who interned at Broadlawns Polk County Hospital, Des Moines, is practicing with **Dr. John F. Foss**, in Burlington.

Dr. Lester D. Powell, Des Moines surgeon, has made a very satisfactory recovery from the operation performed on him at the Mayo Clinic several weeks ago.

Dr. Daniel J. Glomset, who has been living in California since retiring from his Des Moines practice, visited his son for a few days recently while on the way to his favorite fishing grounds.

Dr. Thomas A. Burcham, of Des Moines, president of the Radiology Society of North America in 1936 and a member of its board of directors, was recently given a citation for his service to that Society.

Dr. F. N. Johnson, recently of Boone, is now engaged in general practice in the south-side section of Des Moines.

Following his internship at Lutheran Hospital, **Dr. Carlton Helseth** has associated himself with **Dr. J. D. Anderson**, in Des Moines.

Dr. James E. Baumgarner has come from the University of Kansas Medical Center to enter the practice of urology with **Drs. Emory Mauritz** and **William Shinkle**, in Des Moines.

THE RETREAT HOSPITAL

Des Moines, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
MARTIN J. KRAKAUER, Psychologist
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist

SYDNEY L. MACMULLEN, Administrator
HERBERT W. VETTER, Asst. Administrator

2801 Woodland Ave. **Phone 5-2121**

MEDICOLEGAL SYMPOSIA

The AMA Law Department has scheduled three medicolegal symposia to be held in the fall. The purpose of the meetings is to encourage a closer working relationship between the legal and medical professions and to educate both groups as to their responsibility in the administration of justice in medicolegal cases.

The meetings will be held in Chicago on October 9, in Omaha on October 16, and in New York City on October 30.

A variety of medicolegal subjects will be covered, such as professional liability, the application of the new provisions of the Internal Revenue Code to the medical and legal professions, the role of the physician in detection of violent deaths, and the role of the physician and lawyer in establishing medical facts in a personal injury case.

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of July 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland) Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(Great Lakes, Ill.) .....Lt., U.S.N.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Bickford, R. H., Iowa City
(Lawton, Oklahoma) .....A.U.S.
Blaha, Vernon B., Marshalltown
(Great Lakes, Illinois) .....Lt. Comm., U.S.N.R.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
(Marine Corps Recruit Depot, San Diego, Calif.) .....Lt.(j.g.), U.S.N.R.
Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Eckberg, R. A., Hubbard
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Brooke Army Med. Ctr., Ft. Sam Houston, Texas) .....Capt., A.U.S.

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

Farrior, Richard T., Iowa City
(Tampa, Florida) .....
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.
Hach, Felix, Ankeny
(Ft. Sam Houston, Texas) .....Capt., A.U.S.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hodges, R. E., Iowa City
(Silver Spring, Maryland) .....Capt., A.U.S.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City
Grosse Isle, Michigan) .....N.A.S.
Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.) .....
Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.
Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
McFadden, F. Ross, Davenport
(Corpus Christi, Texas) ....Lt. Commander, U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Olson, Stewart O., Des Moines (Great Lakes Naval Training Station) .....
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Reading, Donald, Iowa City
(U.S. Army Examining Station, Des Moines) .....
Rodgers, G. H., Mt. Ayr
(Brooke Army Hosp., Ft. Sam Houston, Texas)
.....Lt. A.U.S.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Bethesda, Maryland) .....Lt., U.S.N.R.
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Denver, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Swanson, Eric M., Iowa City
(Omaha, Nebraska) .....
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(11th Field Hosp., APO 178, New York City)
.....Capt., A.U.S.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st Lt., U.S.A.F.
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven (Deep Sea Divers, Naval Gun Factory, Washington, D.C.) .....Lt., U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.

RULES OF AMA JUDICIAL COUNCIL

The first permanent judicial body of the American Medical Association, the Committee on Ethics, was appointed in 1858. In 1873 that Committee was replaced by the Judicial Council which has, since that time, been the court of last resort of the Association. The Council consists of five members, elected by the House of Delegates on nomination of the President for terms of five years. Its jurisdiction, defined by the Constitution and Bylaws, includes consideration of (1) ethical and constitutional controversies, (2) questions relating to membership and (3) disputes arising between members or members and their medical societies.

Currently, the appointed members of the AMA Judicial Council are Drs. Homer L. Pearson, Jr., Miami, chairman; Louis A. Buie, Rochester, Minn.; Walter F. Donaldson, Bakerstown, Penna.; J. Morrison Hutcheson, Richmond; and George A. Woodhouse, Pleasant Hill, Ohio. The members *ex officio* are Drs. George F. Lull, secretary of the AMA; Ernest B. Howard, assistant secretary of the AMA; and Austin Smith, editor of JAMA. E. J. Holman is its executive secretary.

The following rules were adopted October 1, 1954:

RULE I. ADMINISTRATION

A. *Meetings.* The Judicial Council will meet during the Annual and Clinical Sessions of the American Medical Association. Other meetings of the Council may be called, on reasonable notice, by the Chairman of the Council; or they shall be

called, on reasonable notice, by the Secretary of the American Medical Association on the written request of at least three members of the Council.

B. *Chairman.* The Judicial Council shall elect from among its members a chairman and vice-chairman each year at the meeting of the Council held during the Annual Session of the Association. Each shall retain the right to vote on all matters.

C. *Quorum.* Three members of the Judicial Council shall constitute a quorum but a majority vote of the entire Council shall be required to adopt any action.

RULE II. APPLICATIONS FOR MEMBERSHIP

A. *Active, Associate and Service Membership.* Applications for active, associate or service membership in the American Medical Association will be considered by the Judicial Council at any meeting upon presentation of the applications by the Secretary of the Association.

B. *Affiliate Membership.* Applications for affiliate membership submitted by physicians who are members of the chartered national medical societies of foreign countries adjacent to the United States or by American physicians who are located in foreign countries and engaged in medical missionary and similar educational and philanthropic labors will be considered at any meeting of the Judicial Council on presentation of the applications by the Secretary of the Association. The Council will consider and approve only those applications which are accompanied by a statement of a responsible and qualified individual attesting to the above set forth requirements.

C. *Refusal of Approval.* An applicant for membership in the American Medical Association whose application has not been approved by the Judicial Council will be promptly notified of such fact, and will be given twenty days within which to request reconsideration of his application in accord with the provisions of Rule III.

RULE III. RECONSIDERATION OF APPLICATIONS FOR MEMBERSHIP

A request for reconsideration of a refusal to approve an application for membership should be initiated by a written statement setting forth the reasons for reconsideration.

RULE IV. ORIGINAL CONTROVERSIES

Original proceedings before the Judicial Council shall be initiated by a written statement. Such statement shall include information (1) identifying the parties to the controversy, including membership affiliations, if applicable, and (2) explaining the nature of the controversy, setting forth the provisions of the Constitution, Bylaws, Rules or Principles of Medical Ethics concerned.

RULE V. APPEALS

Appellate proceedings before the Judicial Council shall be initiated by a written statement of appeal. Such statement shall include information

THIS DR

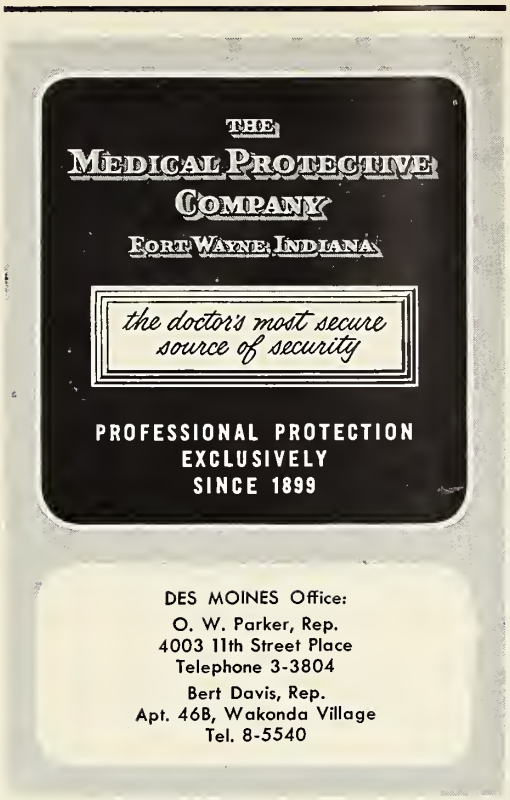
is the symbol
of the
Standardized
Tablets
Quinidine Sulfate
Natural
0.2 Gram
(approx. 3 grains)
produced by
Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.
Boston 18, Mass.

Q4



THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

(1) identifying the parties to the case and indicating membership affiliations when appropriate, (2) showing that the appellant has exhausted remedies made available by the constitution and bylaws of the component society and the constituent association and (3) describing the error of law or procedure which is believed to have occurred during the proceedings. The statement shall also include a concise, factual résumé of the case. Appellant shall submit with the statement the charges, complaints, findings, opinions and decisions previously entered in the case.

RULE VI. INTERPRETATION OF THE CONSTITUTION, BYLAWS, RULES AND PRINCIPLES OF MEDICAL ETHICS OF THE AMERICAN MEDICAL ASSOCIATION

A. *Requests for Interpretation.* Requests for interpretation of the Constitution, Bylaws, Rules or Principles of Medical Ethics of the Association shall be in writing and shall describe the matter to be interpreted in sufficient detail to enable the members of the Judicial Council to evaluate the request in all of its aspects.

B. *Interpretations Initiated by the Council.* The Judicial Council, on its own motion, may render an opinion concerning the interpretation or application of the Constitution, Bylaws, Rules or Principles of Medical Ethics of the Association and may, on its own motion, consider and decide the constitutionality and validity of all rules and regulations adopted by Councils and Committees of the Association pursuant to the Bylaws of the Association.

C. *Discretionary Power.* The Judicial Council may, in its discretion, refuse to consider requests for interpretation of the Principles of Medical Ethics which in the opinion of the Council should be resolved by a component society or a constituent association. Requests for interpretation of the Principles of Medical Ethics which are not of national interest and relate to the observance of local customs and ideals may be readdressed to the component society or constituent association primarily responsible for knowledge of the requirements of such local customs and recognized ideals.

RULE VII. JURISDICTION

The Judicial Council may, on its own motion or on the motion of any party, determine the question of jurisdiction at any stage of the proceedings.

RULE VIII. ADDITIONAL STATEMENTS AND RECORD

After a statement has been submitted to the Judicial Council with the intention of initiating an action, all other parties in interest shall have the right to submit a statement on their behalf. Such statements shall be filed within thirty days after the filing of the initiating statement unless additional time is granted by the Council.

The Judicial Council may thereafter require the

parties to submit such transcripts of testimony, records, written statements supporting their contentions or other material as the Council may deem necessary.

RULE IX. HEARINGS

A. *Notice of Hearings.* The Council may, in its discretion, determine whether a hearing is necessary or advisable. The Council will designate the time and place for all hearings, giving reasonable notice thereof to all parties.

B. *Attendance.* The attendance at hearings may be limited to the members of the Judicial Council, the staff, witnesses, if any, the parties and counsel, who may speak in their behalf. Should any party to the controversy fail to appear, the Council may, in its discretion, continue, dismiss or decide the matter.

C. *Evidence and Argument.* The Judicial Council will not be bound by technical rules of evidence usually employed in legal proceedings but may accept any evidence it deems appropriate and pertinent.

In any appeal case the review, if any, of the evidence will be limited to the evidence presented in the proceedings before the component society and constituent association or appropriate committee, board, or group thereof; provided, however, that in the event the Council is of the opinion such evidence is inadequate to determine the question of law or procedure presented, the Council, on its own motion or on the suggestion of any party, may require the production of additional evidence before the Council or refer the matter to the appropriate body for additional evidence.

In matters other than appeal cases, the Judicial Council will grant the parties the right to present evidence to the extent the Council believes appropriate to the particular matter in controversy.

In all hearings, the Council, within reasonable limitations, will allow oral argument.

D. *Record.* In hearings of original controversies, appeals and in other proceedings a transcript may be made at the discretion of the Council.

RULE X. OPINIONS

All opinions or decisions of the Judicial Council shall be in writing. Copies of the opinion or decision and the dissent, if any, will be filed as a part of the record and furnished to all the parties involved.

RULE XI. FILING AND COPIES

Eight copies of all documents shall be submitted to the Executive Secretary of the Judicial Council. One copy of each document shall be submitted at the same time to each of the other parties to the controversy.

METICORTEN
PREDNISONE
Schering
SCHERING
in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
of sodium retention
and potassium depletion
*T.M.
METICORTEN,* brand of prednisone.

Crescent Sam had the drop on him—briefly



"I'M a she-wolf from Bitter Creek and it's my night to howl!"

Crescent Sam stepped into the kerosene glow of the biggest saloon in Perry, Oklahoma, and fired a six-gun into the air.

Suddenly, he spotted the stern-faced peace officer you see here. He aimed and pulled.

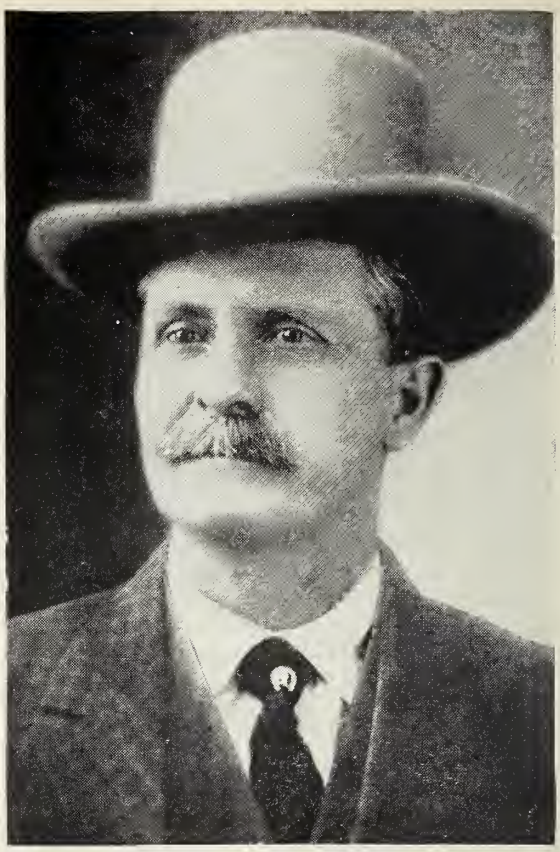
And in a gun flash, he lay dead.

Crescent Sam, thief and killer, had made the fatal mistake of trying to outshoot Bill Tilghman, Tilghman who, shooting from the hip, could hole the ace of spades at 30 feet. Tilghman who once said, "I never shot at a man in my life and missed him."

Bill Tilghman was no legendary gun fighter. He was the genuine article, a fearless, honest frontier marshal described by the San Francisco Examiner as "the best peace officer the West ever knew."

His hardy spirit and resolute courage are a legacy today's 160 million Americans proudly share. And when you consider that those Americans are the people who stand behind U. S. Savings Bonds, it's easy to see why these Bonds are one of the world's finest investments.

Why not guard *your* security the safe way that helps your country? Invest in—and hold—U. S. Series E Savings Bonds.



It's actually easy to save money—when you buy United States Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done for you. And the Bonds you receive will pay you interest at the rate of 3% per year, compounded semiannually, for as long as 19 years and 8 months if you wish! Sign up today! Or, if you're self-employed, invest in Bonds regularly where you bank. There's no surer place to put your money, for United States Savings Bonds are as safe as America!

Safe as America—
U. S. Savings Bonds

PUBLIC SERVICE · ADVERTISING COUNCIL ·

The U. S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.


MEDICAMENTA VERA
PARKE, DAVIS & COMPANY
DETROIT MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV SEPTEMBER, 1955 No. 9

CONTENTS

The Antrum and Present Day Gastric Surgery
Harry H. McCarthy, M.D., and Charles M. Wilhelmj, M.D., Omaha, Nebraska 451
Surgical Lesions of the Small Intestine
Elwood P. Russell, M.D., Burlington 457
Acute Disseminated Histoplasmosis: Report of a Case in an Adult
Clement A. Sones, M.D., Maurice J. Rotkow, M.D., and Robert C. Dunn, M.D., Des Moines . . 463
What Your Blue Shield Means to You
Francis T. Hodges, M.D., San Francisco, California 469
Statistics on 100 Cases of Retinal Detachment Surgery
Alson E. Braley, M.D., and H. B. Ostler, M.D., Iowa City 473
Mercy Hospital, Des Moines, Clinicopathologic Conference 477

EDITORIALS

Have You Missed a Valuable Experience? 485
Early Ambulation 485
A Definition to End All Definitions 486

SPECIAL DEPARTMENTS

Coming Meetings 484
President's Page 492
Journal Book Shelf 493
Blue Cross-Blue Shield 494
Your Blue Shield President Reports 495
Iowa Academy of General Practice 496
State Department of Health 498
The Doctor's Business 500
Mental Illness 501
Woman's Auxiliary News 502
The Month in Washington xx
Personals xxvi
Deaths xxxvi
Speakers' Bureau Schedules xxxix
Roster of Iowa Physicians in Military Service . . . xliv

MISCELLANEOUS

International College of Surgeons 462
A Substitute for the Doctor Draft 468
Routine Examination of Colon Advised 476
Letter to the Editor 486
Short Courses at Iowa City 487
SUI Gets Kellogg Subsidy 490
Clinical Chemistry for Physicians 490
Weight Control 490
Meeting on Rural Health 491
Boy Scout Fund Raising 491
General Practitioners' Courses at Minneapolis . . . 496
Conference on Tuberculosis 497
Stomach Ulcers in Children 501
Radiology for Radiologists xxiii
Rehabilitation Conference at Creighton xxiv
Diabetic's Cookbook xxiv
For Patients Only xxiv
American Fracture Association xxxvi
Interstate Postgraduate Medical Assn. xxxvi
Essay Contests xl
Chlorophyll Not Altogether Discredited xl
Pediatrics for Pediatricians xlii
Ciba Plans Medical T-V Series xlii
Short Course Plus Vacation xliii
Easter Chicks Carry Stomach Infection xliii
Eye Defects Common Among Cerebral Palsied . . . xliii

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
EDWARD W. HAMILTON, Ph.D., Asst. Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

FRED STERNAGEL, M.D.....West Des Moines
GEORGE H. SCANLON, M.D.....Iowa City
ERNEST M. KERSTEN, M.D.....Fort Dodge
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

Scientific Articles

The Antrum and Present Day Gastric Surgery

HARRY H. McCARTHY, M.D., AND CHARLES M. WILHELMJ, M.D.

OMAHA, NEBRASKA

THE ANTRUM OF THE stomach has long been the focal point of the physiologist's interest, and it recently has become a major concern of the surgeon. We have devoted considerable attention to this subject since 1936, at which time much of the research work that forms the basis for this paper was published.

It is now more important than ever that one have a thorough understanding of gastric physiology, for the stomach is now resected from above (transthoracically), or from below (transabdominally), for surgical lesions of the stomach *per se,* or in procedures on other organs, such as the pancreas, colon and esophagus. The function of the vagi is assuming its proper niche in the surgery of the stomach. Now, as in former years, surgical procedures are done empirically and are evaluated eventually much to the detriment of the patients. Instead, the surgical approach to gastric lesions should be made on the basis of sound physiologic principles.

First, we shall present a brief description of the function of the stomach, with particular reference to the automatic control by the antrum, and afterward we shall discuss the physiologic principles governing the stomach as they apply to certain surgical procedures.

The stomach is anatomically divided into the fundus, the body, and the pyloric segment or antrum. The fundus is that part of the stomach above a horizontal line drawn through the cardiac sphincter. The body is that portion of the stomach between the above-described boundary and a line drawn from the incisura on the lesser curvature to a corresponding point on the greater curvature. The portion of the stomach between the lower boundary of the body and the pyloric sphincter—the pyloric segment or antrum—constitutes about one-fifth of the stomach. The body contains the greater portion of the acid-secreting tissue, whereas the antrum possesses chiefly mucus-secreting glands.

A true picture of gastric secretion can be obtained only by using an accurate analysis of the amount of acid fluid (HCl) and non-acid fluid (mucus, bile, duodenal secretions, pancreatic secretions) following use of a proper stimulating meal. Calculation of the factor of dilution is indispensable. This method has previously been described by one of us.[1] If two patients secrete the same amount of acid in a given period of time, and the acid of the first patient is diluted by twice as much non-acid fluid, one would conclude that this patient (without calculation of the factor of dilution) secreted half as much acid as the second patient. Dragstedt[8] explains it a little differently by stating that if he were seated on a park bench between a beggar and John D. Rockefeller and each gave him a dollar, the gifts would be of equal value, but would represent quite different segments of their donors' total wealth.

There are three phases of stimulation of the flow of hydrochloric acid—the cephalic phase, the intragastric chemical phase and the intestinal phase. The cephalic phase results from psychic and perhaps other stimuli which are carried by the vagi and which prepare the field for the arrival of ingested food. The cephalic phase oc-

Drs. McCarthy and Wilhelmj are staff members in the Departments of Experimental Surgery and Physiology at the Creighton University School of Medicine.

cupies about 20 minutes and is destroyed by vagotomy. Products of digestion produce gastrin, which in turn sets up the second or intragastric chemical phase, lasting approximately two hours. As this stimulation begins to diminish, products of digestion within the intestine stimulate a third wave of secretion four to six hours after the ingestion of food. The cephalic and intragastric chemical phases account for about 90 per cent of the secretion, whereas the intestinal phase accounts for about 10 per cent. The intragastric chemical phase is the most intense of the three, and depends upon the antrum for its function. Resection of the antrum is imperative in controlling this second phase, though it is obvious that, were it either desirable or feasible, excision of all acid-bearing tissue would produce the same result. The reasoning behind the resection of the upper portion of the stomach is different from that which underlies resection of the lower part. All three phases of gastric secretion can be studied separately. As for the importance of the antrum as a focal point of stimulation of HCl, Wilhelmj, O'Brien and Hill[2] proved that only one-fifth or one-sixth as much secretion occurred in whole stomach pouches from which the antrums had been removed, as in whole stomach pouches of which the antrums had been left *in situ* (Figure 1). Dragstedt and others have substantiated those findings.

In addition, it was shown that the decrease was due to quantity, rather than to a diminished concentration of acid secreted by the fundus.[3] If antrectomy is combined with vagotomy, a marked reduction in acid occurs[4] (Figure 2). In fact, in 51 experiments conducted upon four dogs, 17, or 33 per cent, were characterized by anacidity, and all experiments showed marked reduction in acid secretion (Tables 1 and 2). However, since the same dogs were able to secrete acid following the injection of histamine, it became apparent that the stomach was still capable of secreting acid and that this drug is a powerful stimulus acting in a manner unlike that of the usual stimuli.

TABLE 1

Dog #1	8 of 16 experiments	50 per cent
Dog #2	4 of 14 experiments	29 per cent
Dog #3	5 of 14 experiments	36 per cent
Dog #4	0 of 7 experiments	0 per cent

Experiments that gave complete anacidities following partial gastrectomy and vagotomy.

TABLE 2

Dog	*Per cent*
#1	36
#2	35
#3	37
#4	38

Percentage reduction of acid (i.e., of actual acidity from calculated value) following partial gastrectomy and vagotomy.

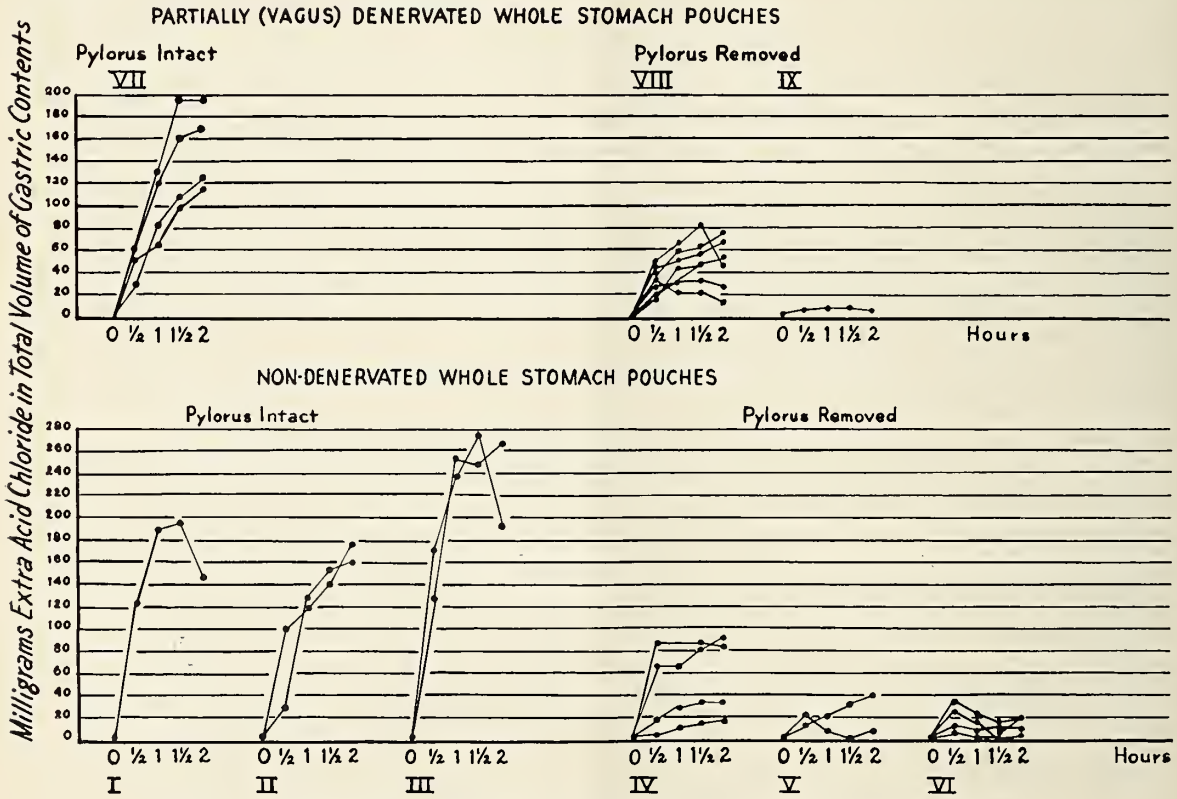


Figure 1. Gastric acidity before and after removal of pylorus in whole stomach pouches.

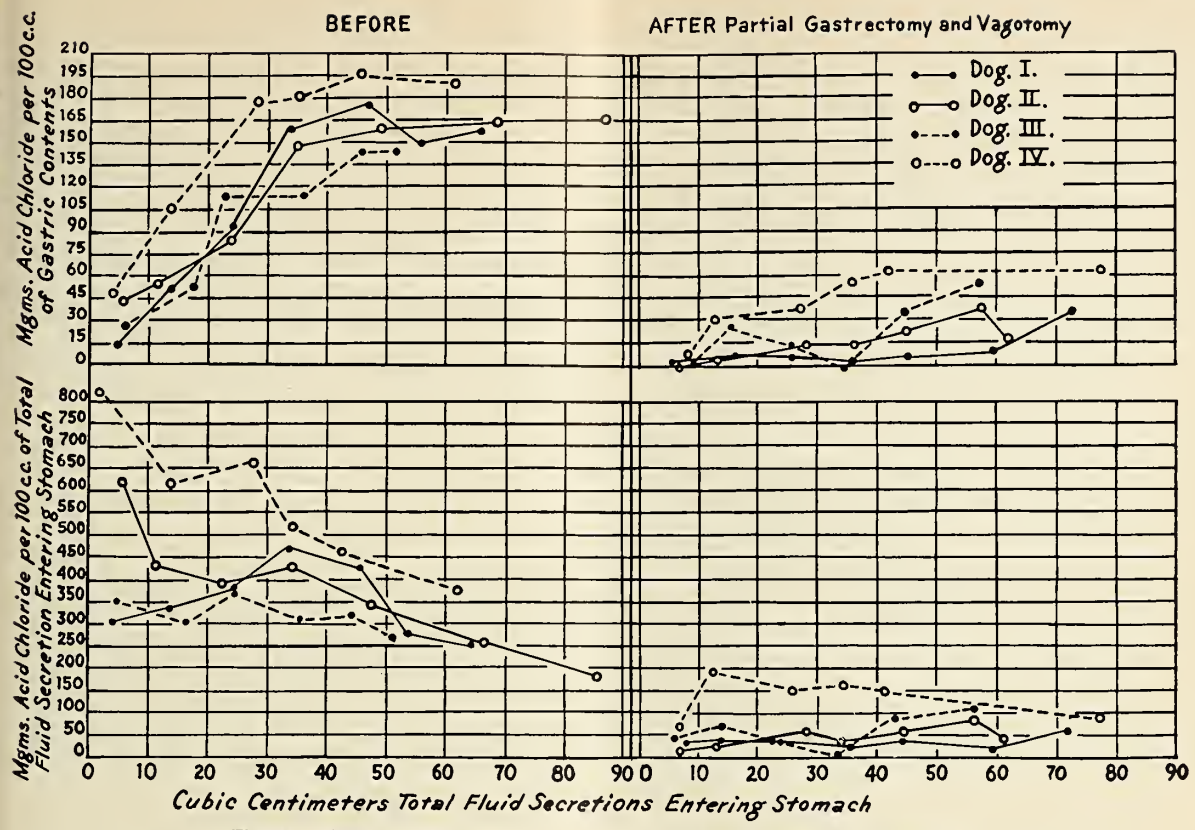


Figure 2. Gastric acidity before and after partial gastrectomy and vagotomy.

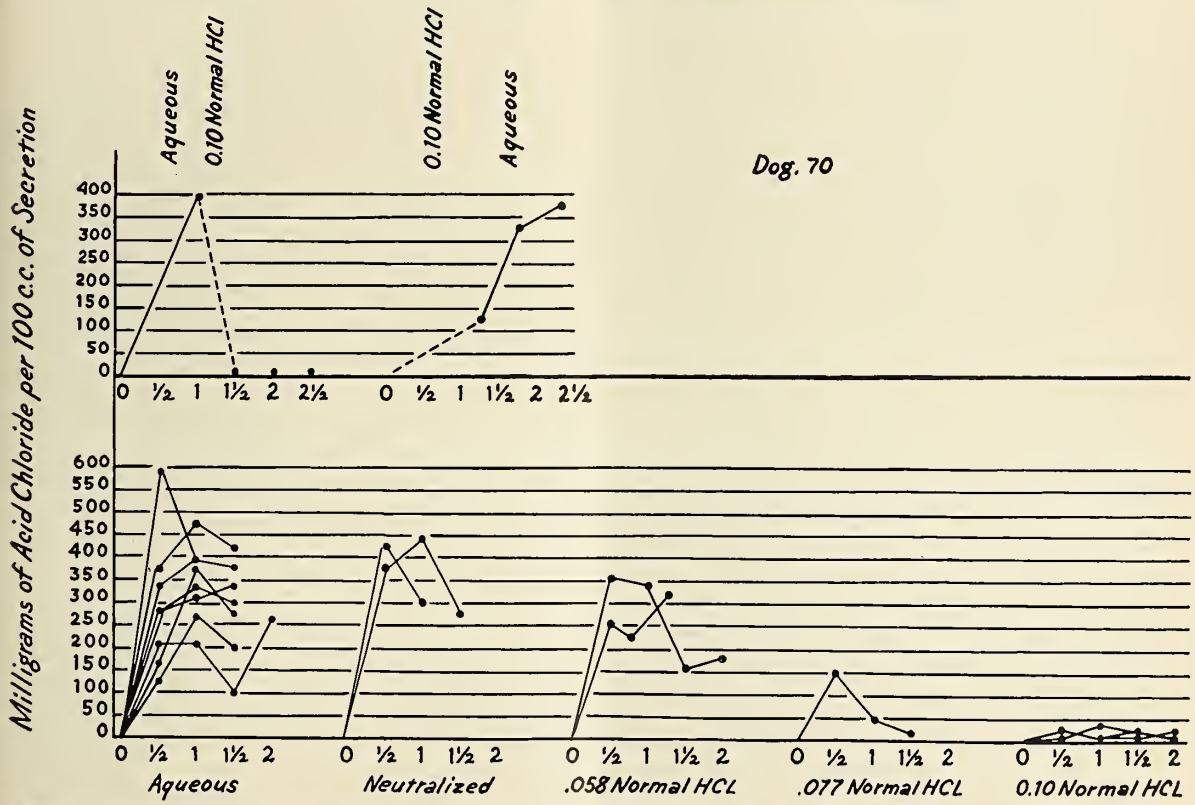


Figure 3. Diagram showing progressive inhibition of the secretion of acid in the presence of increasing concentrations of hydrochloric acid test meals placed in the stomach.

ACID INHIBITION

There is an interesting counterpart to the stimulation of hydrochloric acid secretion. The stomach possesses a unique system of automatic inhibition of the secretion of acid. Our results have shown that the antrum plays an important role in this mechanism.[5] Recently, Dragstedt has revived interest in this function of the stomach. The gastric glands secrete acid at a constant strength (.173N), and as the intraluminal concentration reaches 0.06N (60 clinical units), inhibitory influences begin to reduce the amount of secretion through their influence on the antrum (Figure 3). This mechanism becomes increasingly active, and at 0.1N, the chemical phase is completely inhibited or markedly decreased. Thus, an excessive rise in the concentration of acid is prevented (Figure 4). As the intragastric chemical phase begins to wear off and food products reach the intestine to stimulate the formation of acid once more, the increasing concentration of acid chyme entering the intestine inhibits secretion. Were it not for this mechanism, the secretion of acid might continue for hours, as it does in whole stomach pouches when the esophagus has been anastomosed to the duodenum. However, when the intestinal and intragastric chemical phases are simultaneously combined, the presence of 0.1N HCl in the stomach and intestine usually is not enough to inhibit gastric secretion. There is evidence of a shift in the threshold of acid inhibition due to the greater strength of the combined intragastric chemical and intestinal phases than of the acid-inhibition mechanism. The cephalic phase is usually able to break through the threshold of acid inhibition,[7] a fact which indicates that the intensity of cephalic stimuli often approximates the strength of simultaneously combined intragastric chemical and intestinal phases. Since the secreting energy of the cephalic phase may exceed that of the other two phases, it is possible to cause a degree of hyperacidity unobtainable by either of the other two phases alone (see diagram of functions of the stomach, Figure 5).

PARTIAL GASTRIC RESECTION—POLYA, HOFMEISTER, BILLROTH I

With the physiologic background just described, one can evaluate various surgical procedures of the stomach. Partial gastric resection of the basic Polya type requires only the removal of the antrum for a radical lowering of acidity. Excision of additional gastric tissue, such as a four-fifths resection, only temporarily reduces the acidity beyond that accomplished by antrectomy, since

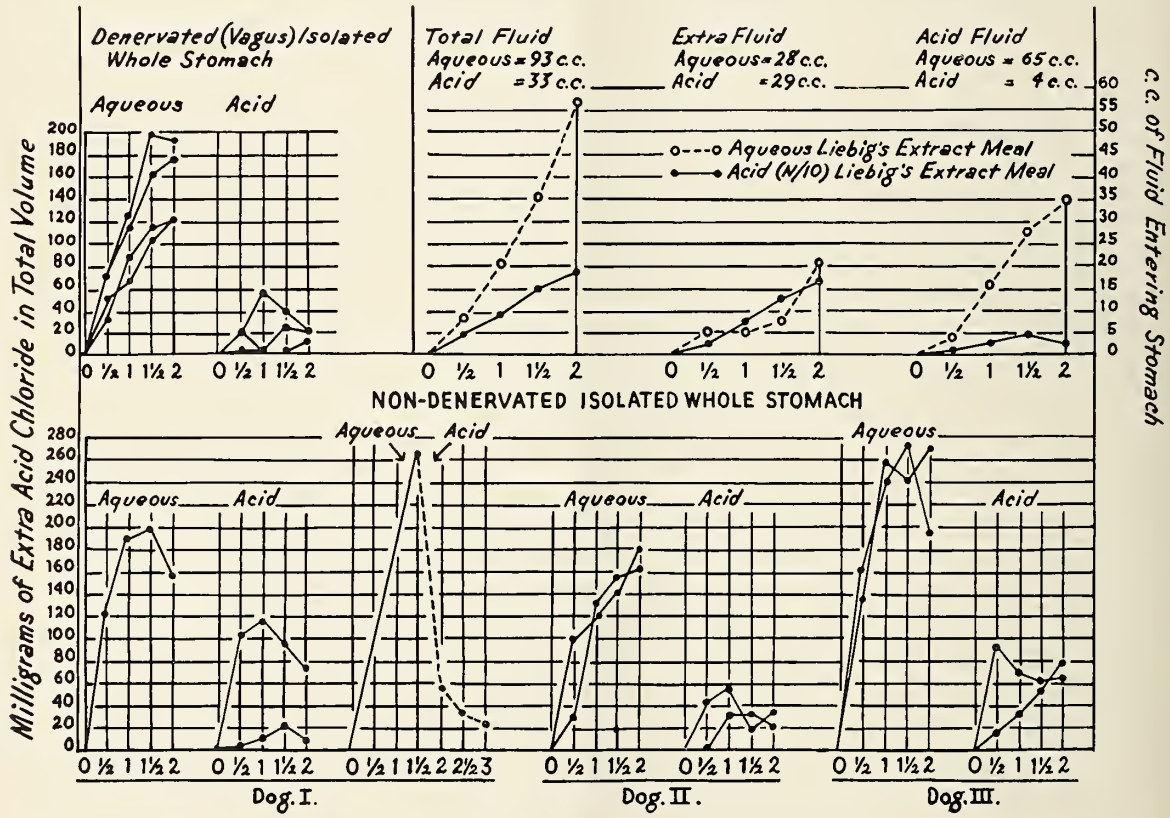


Figure 4. Diagram showing secretion of acid in the presence of aqueous and acid test meals.

hypertrophy of acid-bearing tissue occurs unless a minimum of seven-eighths of the stomach is removed. This procedure suffices for most peptic ulcers. Occasionally where the secretion is greater, a marginal ulcer results. Vagotomy may be necessary in addition to the partial resection. A combination of both procedures produces anacidity in most cases.

The more closely an anastomosis following partial or total gastrectomy resembles normal continuity of organs, the better the result obtained. For instance, physiologically better results are secured following the Billroth I than the Polya procedure, or better results follow an esophagoduodenostomy than an esophagojejunostomy.

PANCREATECTOMY

The use of partial gastric resection is recommended as a fundamental part of pancreatic resections. Loss of the alkaline secretions of the pancreas and the diversion of alkaline bile following pancreatic resections raises the possibility of marginal ulcers in a high percentage of unphysiologic surgical procedures. Little extra time and work are required for the resection of the antrum in addition to gastroenterostomy, and the security that it affords more than justifies it. As results following pancreatectomy are reported and as patients survive for longer periods of time, there seems to be little question that a large percentage of marginal ulcers will occur unless antrectomy is also done.

UPPER GASTRIC RESECTIONS

Transthoracic gastric resection of the upper portions of the stomach poses a very important problem, in that the esophagus replaces the duodenum or the jejunum as a target for peptic ulceration. The added factor of loss of protection of the cardiac sphincter demands that greater attention be paid to the reduction of acidity. The removal of the greater portion of the acid-bearing tissue is of utmost importance, since the antrum would then have little glandular tissue to stimulate. It is desirable to leave merely a small tubular portion of the greater curvature of the stomach, unless length is necessary for a very high esophageal resection. It would be ideal, of course, though not so practical, to create a tube of greater curvature, with excision of the antral segment, combined with esophagogastrostomy (Figures 6 and 7).

VAGOTOMY

Except by a minority of surgeons, vagotomy has been abandoned as a routine of preliminary measure in the treatment of peptic ulcer, mainly because of the factors of retention and obstruction. This is particularly true in gastric ulcer, for such patients do not usually have as high a concentration of acid as do those who have duodenal

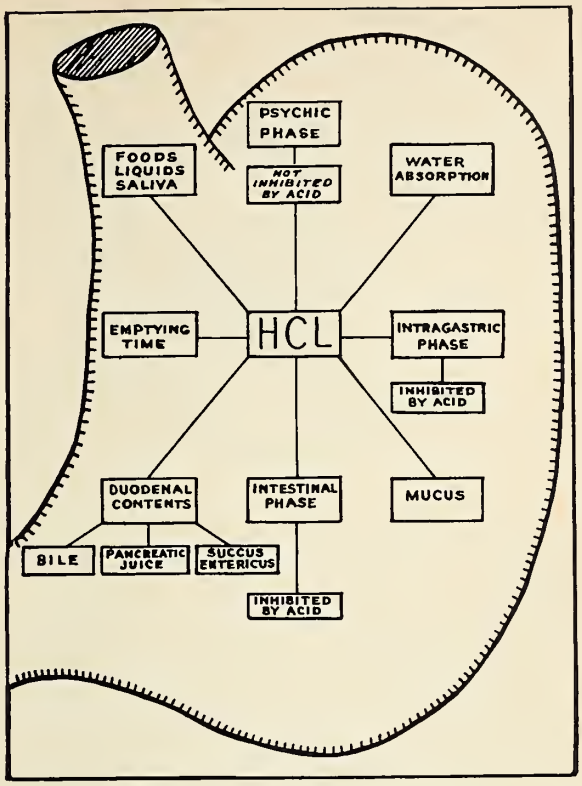


Figure 5. Diagram showing factors which dilute, concentrate or neutralize hydrochloric acid in the stomach.

ulcer, and the danger of malignant degeneration of gastric ulcer precludes leaving the lesion *in situ*. At this point, it would be well for us to mention obstructive phenomena following incidental vagotomy during resection of esophageal or upper gastric lesions. In those cases with persistent retention of gastric content due to pylorospasm, a right upper rectus incision with pylorotomy should be done. Following the upper gastric or esophageal resections, there is evidence that a high percentage of patients experience a variety of symptoms due to esophagitis, peptic ulceration of the esophagus and pylorospasm, and that in these cases a pylorotomy at the time of the major procedure should be most beneficial.

Three cases illustrate this point. The first is that of a 72-year-old white man who had had a near-total gastric resection and esophagogastrostomy for carcinoma of the lower third of the esophagus. An uneventful recovery took place, but four weeks postoperatively he developed severe and frequent hematemesis. As could have been expected, there was no pain, for vagotomy masks bleeding and peptic ulcer perforation. Three separate gastrointestinal studies following the patient's ingestion of a barium meal showed persistent obstruction of the pylorus, with five hour retention. The bleeding was thought possibly to be due to a peptic ulceration of the esophagus as-

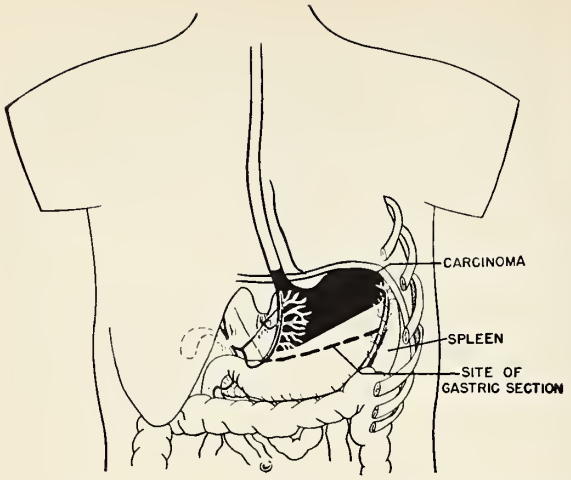


Figure 6. Diagram showing portion of stomach (shaded area) to be removed in upper gastric or lower esophageal resections.

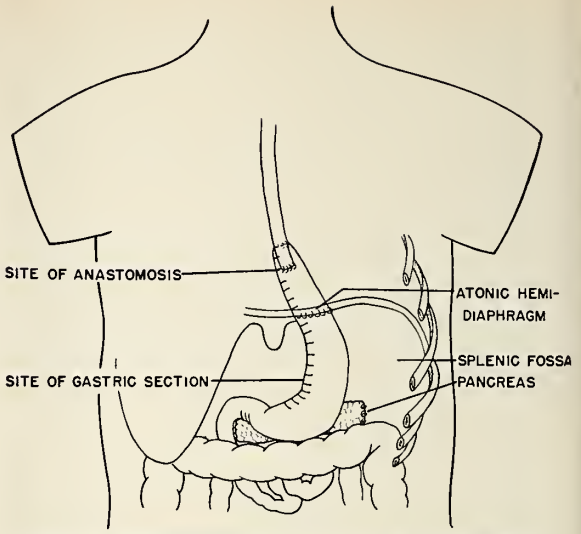


Figure 7. Esophagogastrostomy following upper gastric or lower esophageal resections.

sociated with pylorospasm, or a bleeding duodenal ulcer with obstruction. The patient's condition did not permit an esophagoscopy, and permission for surgical intervention was withheld for a considerable period before finally being granted. Under local anesthesia, a right upper rectus incision was made and the pylorospasm was verified. Pylorotomy was done, and the immediate vicinity of the stomach and duodenum was examined for a bleeding lesion. None was found. Pylorotomy was performed instead of antrectomy because it afforded direct visualization of the bleeding point, but the more important reason was that the transthoracic resection reduced the blood supply, and it might have been further jeopardized if resection had been attempted. Following pylorotomy, the patient experienced complete cessation of vomiting, and no further bleeding ensued.

A second case was that of a 50-year-old white man who had had a total gastric resection with an esophagoduodenostomy for a massive carcinoma. Since additional tissue was necessary for the anastomosis, the pyloric valve and a cuff of antrum measuring approximately 1 cm. were allowed to remain so as to accomplish the anastomosis without tension. The patient experienced a dysphagia which improved at times but at others was very persistent. Fluoroscopic observation following his ingestion of a barium meal and esophagoscopy revealed a smooth, obstructing constricted area at the site of the pyloric sphincter. The patient refused pylorotomy. Fortunately, he exhausted the spasm after many months, and at the present time is able to eat without difficulty. A pylorotomy would have assured him better nourishment and less inconvenience, had it been performed at the time of the first operation.

In contrast, a third case, a 65-year-old white man, had a severe secondary anemia due to a bleeding carcinoma of the upper third of his stomach. A total gastrectomy was followed by an esophagoduodenostomy. The patient had an uneventful recovery, experiencing no digestive or obstructive symptoms.

"SLEEVE" RESECTION

"Sleeve" resection of benign gastric ulcers is essentially a physiologic procedure, since reduction of acid is not a prerequisite for cure, as it is in duodenal ulcer surgery. Because many cases experience symptoms due to stasis, pylorotomy is often necessary.

GASTROENTEROSTOMY

Gastroenterostomy is an unsatisfactory procedure in the treatment of peptic ulceration, since it does not neutralize or remove the cause of hypersecretion of acid. The little reduction in acidity which may result following a gastroenterostomy is due to dilution of the acid by regurgitant non-acid fluid, rather than to a reduction in the amount of acid secreted. This latter feature—that is, the dilution of acid—and the factor of partial reduction in gastric acidity account for some of the favorable results following vagotomy and gastroenterostomy in the treatment of peptic ulcer. Vagotomy, thus, receives undue credit.

SUMMARY

1. The physiology of the stomach has been presented as it applies to present day gastric surgery.

2. Stress has been put upon the importance of the antrum in the initiation and continuation of the intragastric chemical phase, as well as upon its role in acid inhibition.

3. The physiologic principles which should govern gastric resection have been presented.

REFERENCES

1. McCarthy, H. H.: Effect of vagotomy and partial gastrectomy on gastric acidity; effect of stimulation of psychic phase in presence of tenth normal hydrochloric acid in stomach. Proc. Staff Meet., Mayo Clin., **21**:142-150, (Apr. 3) 1946.
2. Wilhelmj, C. M., O'Brien, F. T., and Hill, F. C.: Influence of pylorus on secretion of acid by fundus. Am. J. Physiol., **116**:685-696, 1936.
3. Wilhelmj, C. M., McCarthy, H. H., O'Brien, F. T., and Hill, F. C.: Influence of pylorectomy upon strength of acid secreted by fundus. Am. J. Physiol., **118**:505-509, (Mar.) 1937.
4. Wilhelmj, C. M., McCarthy, H. H., and Hill, F. C.: Gastric acidity following partial gastrectomy and vagotomy. Am. J. Physiol., **117**:533-541, (Nov.) 1936.
5. Wilhelmj, C. M., McCarthy, H. H., and Hill, F. C.: Acid inhibition of intestinal and intragastric chemical phases of gastric secretion. Am. J. Physiol., **118**:766-774, (Apr.) 1937.
6. Wilhelmj, C. M., O'Brien, F. T., and Hill, F. C.: Inhibitory influence of acidity of gastric contents on secretion of acid by stomach. Am. J. Physiol., **115**:429-440, (Apr.) 1936.
7. Wilhelmj, C. M., McCarthy, H. H., and Hill, F. C.: Acid inhibition and cephalic (psychic) phase of gastric secretion. Am. J. Physiol., **120**:619-623, (Nov.) 1937.
8. Dragstedt, L. R.: Gastric vagotomy in treatment of peptic ulcer. Postgrad. Med., **10**:482-490, (Dec.) 1951.

Surgical Lesions of the Small Intestine

ELWOOD P. RUSSELL, M.D.

BURLINGTON

The varied lesions of the small intestine, excluding duodenal ulcers, constitute two to three per cent of the gastrointestinal conditions falling within the province of the surgeon. They often are diagnostically difficult and are not diagnosed preoperatively. Obstruction is the commonest symptom, and as a rule, the external types such as strangulated hernia are obvious. The possibility of a small bowel lesion must be borne in mind in all cases of ill-defined abdominal pain, whether intermittent or constant. For discussion, I have classified them as: tumors, inflammations, developmental anomalies, hernias, vascular conditions, and miscellaneous.

TUMORS

All tumors found elsewhere in the intestinal tract may be found in the small intestine. Primary malignant disease of the small intestine occurs in about a tenth of one per cent of general autopsies—36 times less frequently than malignancy in the large bowel. The commonest symptoms are those of obstruction, present in about 75 per cent, and secondary anemia.

Carcinoma of the duodenum constitutes 50 per cent of the malignant tumors of the small bowel. The ileum ranks lowest for carcinoma and highest for sarcoma.

Case 1. A 49-year-old white male whom I encountered during my surgical residency had had some weight and strength loss, with tarry stools for seven weeks. There was no nausea, vomiting or distention. He appeared anemic, with a little splinting of the right upper quadrant, but without tenderness or palpable mass. The hemoglobin was 3.8 Gm., the red blood count was 1,330,000, and the white blood count was 7,800, with occult blood in the stool and gastric contents. X-rays showed a filling defect of the duodenum. At laparotomy there was visible blood in the small intestine. At the junction of the second and third portions of the duodenum, a doughnut-shaped tumor lay on the posterior wall, grayish-white in color, firm, and 3.5 cm. in width and 1 cm. in thickness. It was excised, adequate lumen remaining after closure. There was no evidence of metastasis. The pathologic report identified it as a well differentiated adenocarcinoma. At an 18-months check up, the patient was feeling well.

Case 2. A 30-year-old white woman with an asymptomatic abdominal tumor appeared anemic and had a non-tender, orange-sized, movable mass above the umbilicus which would disappear beneath the right costal margin upon pressure. Her white blood count was 9,000; the red blood count was 3,700,000; and the hemoglobin was 9.5 Gm., with no occult blood in the stools. Excretory pyelograms and x-rays of the gastrointestinal tract were normal. A firm, reddish-gray tumor of the jejunum, the size of a tennis ball, was resected from the antimesenteric side of the bowel. The pathologic diagnosis was myosarcoma of the jejunum, not highly malignant. That woman is in excellent condition after four years.

Case 3. In a white male, 56 years old, whose obstructive symptoms had been present for three days, a barium enema showed a normal colon with evidence of small bowel obstruction. Complete obstruction of the lower ileum was due to a 6 x 3 cm. tumor on the mesenteric side of the bowel. It was firm and reddish-gray in color. A resection was done, and the patient died after eight and a half hours. Autopsy showed a recent volvulus of the small bowel, with change in the entire small bowel, and aspiration pneumonia. The tumor removed at surgery was a liposarcoma.

Case 4. A white male, 65, with marked weight loss and left lower quadrant pain of several weeks' duration suddenly had an acute intestinal obstruction. When I saw him, after 24 hours, he

had severe, generalized, colicky abdominal pain, and was in mild shock. The abdomen showed moderate distention, but there were no palpable masses. A sort of doughy feeling existed. At surgery, an obstruction of the mid-ileum was encountered. There were two areas of ileum about six feet apart containing annular, sausage-shaped, firm, whitish-gray masses. A perforation was present above the upper obstructing mass. An ileostomy was done, because of his extremely poor condition, and the tumor was biopsied. He expired after twelve hours. The pathologic diagnosis was lymphosarcoma. This patchy involvement is typical of lymphosarcoma, resembling tumor more than inflammatory reaction.

Case 5. A 53-year-old white male with an asymptomatic abdominal mass of three week's duration had a hard and movable mid-abdominal mass above the umbilicus. X-rays of the gastrointestinal tract were normal. On exploration, we found a tumor of the mesentery of the upper jejunum the size of a tennis ball, and one of the transverse mesacolon the size of a large grapefruit. Biopsy of the mesocolic mass revealed lymphosarcoma. A course of deep irradiation therapy melted away the masses. The patient worked for about three months, gradually losing round. The liver was markedly enlarged, and he was given a course of nitrogen mustard, but he died about six weeks later. Autopsy showed a fibrous replacement of the original tumor masses. The liver was enlarged and filled with many areas of lymphomatous tissue, and there were a number of necrotic areas attributed to the nitrogen mustard therapy. Some jaundice was present for several weeks before death.

Case 6. A very acutely inflamed retrocecal appendix was removed from a 48-year-old white male. The pathologist reported acute suppurative appendicitis and adenocarcinoma in the appendix, and fibroadipose tissue. Colon X-rays, one month later, showed a small filling defect at the appendectomy site. When the patient was reoperated, the cecum showed some thickening at this site without evidence of metastasis. The cecum was removed, together with the remaining meso-appendix. The pathologist then reported tiny, focal areas of carcinoma in the fatty tissue which represented the meso-appendix, but none in the bowel. The patient's convalescence was satisfactory. He was X-rayed at 6-month intervals, and no recurrence was demonstrated. After five years, when I again explored him, he had developed obstructive symptoms, and the peritoneal cavity was filled with carcinomatous tissue. It was impossible to mobilize any small bowel, and in consequence I did an ileostomy and biopsied the tumor tissue. Pathologic diagnosis: metastatic adenocarcinoma. He gradually declined and expired.

Carcinoid. Carcinoids superficially resemble carcinomas, but differ markedly from them in that they are much less malignant. They originate most frequently in the appendix and lower ileum, less often in the upper ileum, and rarely in the colon. They may be multiple. They are yellowish or grayish-white submucosal tumors which may reach several centimeters in size. Microscopically, they resemble a basal cell carcinoma and contain silver staining granules. They represent about 18 per cent of all gastrointestinal tumors. Cook collected 115 cases, 33 per cent of which were multiple. In that series, 21 were malignant, 10 metastatic to regional nodes, 3 by direct extension and 8 generally. The liver is usually involved in general metastases. Frequently, carcinoids of the small intestine cause obstruction. The small bowel lesions are most likely to metastasize.

The treatment is surgical removal of the primary lesion and, if possible, any metastatic ones. Where only the primary tumor exists, the outlook is favorable.

Case 7. A 16-year-old white boy had been ill for one week with intermittent pain in the right lower quadrant and some nausea, but no vomiting or urinary difficulty. His temperature was 99.8°F. A moderately tender, egg-sized mass was present in the right lower quadrant, with slight muscle splinting. The white blood count was 17,200.

Our diagnosis was acute appendicitis, perforated, with abscess or intussusception of the ileum into the cecum. The tumor had supplanted the appendix, invaded the cecum, and adhered to the contiguous bowel by low-grade inflammatory reaction. The tumor and the cecum were resected, and convalescence was uneventful. This was a carcinoid tumor invading the cecum, with a small abscess in the mid-portion. This lad is well after 16 years. I present this case to show the favorable prognosis where the primary lesion can be removed completely.

Benign tumors. The benign tumors of the small intestine are usually discovered as a result of their tendency toward a few symptoms, such as obstruction, which may be of the obturative type, invagination, inflammation and, at times, perforation. The less severe symptoms are those of local irritability. Bleeding may be sudden and severe, or protracted and producing a secondary anemia. Some of these lesions become malignant. These tumors consist of leiomyoma, lipoma, fibroma, adenoma, neurofibroma, hemangioma, melanoma, endometriosis, and pancreatic rests. The leiomyoma is commonest of the group. Reviewing the literature. Smith found 109 cases in the small bowel, with bleeding in 78 per cent. He also reviewed 67 cases of lipoma, which constituted a small percentage of the tumors, and noted that 79 per cent were asymptomatic. They predominate in middle life and may be single or multiple.

I have never encountered a small-bowel lipoma, but last year reported a case of a 70-year-old male with lipoma and intussusception of the transverse colon. The vascular tumors bleed and are the most likely to become malignant.

INFLAMMATIONS

Regional ileitis is a disease of unknown cause, first described as a clinical entity by Crohn and associates in 1932. It is a non-specific, granulomatous, inflammatory process involving not only the terminal ileum but any of the other parts of the ileum, the jejunum, or even the colon. The process commonly spreads upward or into the colon, with intervening areas of normal bowel, the so-called "skip" areas. Symptoms are those of cramping pain in the right lower quadrant, with diarrhea and nausea, weight loss, anemia and, occasionally, obstructive symptoms. Later fistulae may develop. The string sign of Kantor as observed in X-ray examination is the characteristic filling defect of the terminal ileum due to a marked narrowing of the lumen.

The average age of occurrence is about 29 years. Confusion with acute appendicitis is not unusual. Dr. Charles W. Mayo feels that except in a complication for which surgery is justified, medical management is the treatment of choice, and that most patients should be handled medically for a long time before any surgical treatment is attempted. The best surgical treatment, according to Mayo and Lahey workers, is a radical resection of the diseased bowel (usually terminal ileum and right colon) with an end-to-end anastomosis. At Cleveland Clinic, it is felt that unless a fistula is present, an exclusion operation is preferable. The recurrence rate is high.

Case 8. A white male, 41, with obstructive complaints of 20 hours' duration had had occasional loose stools for two years. Abdominal examination was typical of obstruction. When he underwent operation, a dilated, thick and hyperemic ileum was traced to the cul-de-sac, where a six-inch-long segment of the ileum, one foot from the ileo-cecal valve, was firmly adherent to the recto-sigmoid, producing an acute kinking obstruction. The colon appeared normal. Mobilization of this area of ileitis relieved the the obstruction. This procedure was felt to be adequate, in as much as the patient was quite ill. Convalescence was uneventful.

Typhoid. Typhoid lesions of the bowel were a common complication several years ago. These came as a result of bowel ulcerations, the complications being hemorrhage or perforation, commonly causing death. Surgical intervention saved some of those so complicated.

Tuberculosis. Tuberculosis may involve the intestine independent of pulmonary involvement, and the cecum and ileum are the commonest sites of occurrence. It may be ulcerative or hyperplastic in type. When there is neither obstruction nor perforation, the treatment in medical. A common complaint is abdominal pain, intermittent and colicky, often localized to the right lower quadrant and peri-umbilical area. Weight loss is common. Treatment consists of removing the involved bowel, usually the terminal ileum and right colon. There are other chronic granulomatous tumors resulting from infection involving the small bowel, but their incidence is negligible.

Case 9. A 46-year-old white man, with abdominal pain that had been vague for several months and had become more severe three days before I saw him, had a full-blown obstruction. His lungs were clear, but his condition was otherwise poor, and exploration showed that the cavity was filled with a clear amber fluid and that the serosa of the bowel, both large and small, was covered with tubercles. There was a plastic exudate between bowel loops and colon, with obstruction of the lower ileum. A loop of ileum was brought out just above the obstructive point. The patient lived about one month.

Diverticula. Diverticula of the small intestine occur along the mesenteric side where the vessels pierce the bowel. The majority are asymptomatic because of the fluid content of the bowel. The average occurrence age is 63 years. About 75 per cent occur in the second portion of the duodenum.

Jejunal diverticula are seven times more common than ileal, and usually occur in patients over 40.

Meckel's diverticulum. In about 2 to 3 per cent of cases, the vitelline duct is not entirely obliterated, and as a result, there may be a fibrous band, sinus, cyst, or a diverticulum of the ileum about 18 to 36 inches above the ileo-cecal valve on the anti-mesenteric side. The fibrous band may cause obstruction. Commonest is the Meckel's diverticulum, the vagaries of which are familiar to the surgeon. The manifestations are usually in infancy, approximately half of them coming in the first two years of life. Eighty-five per cent hemorrhage from a heteropic gastric mucosa lining the diverticulum. Symptoms of inflammation simulate acute appendicitis. Obstruction by invagination is also a common complication.

Case 10, vitelline cyst. A white male infant of five months had a serosanguinous discharge from the umbilicus of one month's duration, and a palpable mass of about 2 cm. connecting the umbilicus and the terminal ileum about 18 inches from the ileo-cecal valve. The bladder fundus was adherent by two fibrous cords, apparently urachus remnants. The mass, including the umbilicus, was dissected free from the ileum and bladder. There was no communication with the bowel lumen. The

abdominal wall defect was closed, and the baby made an uneventful recovery. Pathologic diagnosis: vitelline cyst, congenital.

Case 11. A white woman, age 68, had complained of obstructive symptoms for three days. X-rays showed a typical small bowel obstruction. The whole small bowel was dilated greatly to the lower ileum. An impacted concretion, 4 cm. in diameter, obstructing the bowel was removed. Many large diverticula in the lower jejunum and upper ileum were present on the mesenteric border up to 3 to 4 cm. in diameter. The pathologic diagnosis was fecolith, probably formed in a diverticulum and responsible for the intestinal obstruction. The patient's recovery was uneventful.

Case 12. A three-month-old white girl had been ill for 48 hours with paroxysms of pain and recent vomiting. There was some distention. An enema showed a small amount of blood upon the return. Abdominal examination revealed no palpable mass, but the lower abdomen was guarded. On rectal examination there was no mass palpable, but there was blood on the examining finger. Exploration revealed an invaginated Meckel's diverticulum causing intussusception with a devitalized bowel. About ten inches was resected, and the infant's recovery was uneventful.

MISCELLANEOUS GROUP

Adhesions. From 30 to 40 per cent of intestinal obstructions are caused by adhesions, usually the result of inflammatory conditions or trauma. The resultant fibrous bands from the bowel wall to an adjacent bowel loop or to a fixed point cause a kinking obstruction.

Case 13. A white female of 40 had an acute intestinal obstruction two months after hysterectomy and left endometrial cyst removal. An obstruction low in the ileum was found, the knuckle being adherent to an endometrial cyst in the right broad ligament. The obstruction was relieved and the cyst removed. Six weeks later, she had further obstructive symptoms, which progressed to a severe obstruction. When she was again reoperated, extensive adhesions were encountered. I did an ileo transverse colostomy, a partial exclusion procedure. She got along well afterward.

Volvulus is a torsion of the bowel around adhesions, or a malformed mesentery resulting in obstruction, with circulatory impairment.

Case 14. A white female, 25, developed a complete mechanical bowel obstruction eight days after a classical Cesarean section. A marked distention of all the small intestine was found, with many adhesions between the bowel loops and parieties. An area of dense adhesions below the splenic flexure of the colon causing a volvulus was freed, and the torsion returned to normal. A cecostomy was performed, and convalescence was uneventful.

Intussusception. Intussusception is a telescoping of the small or large bowel into a more distal segment, one of the most important surgical emergencies of infancy and early life. If recognized and treated within the first 24 hours, the prognosis is good. Occasionally a chronic type occurs, usually at the ileo-cecal junction. In about 5 per cent of the cases, there is a mechanical cause, such as a Meckel's diverticulum or a polypoid growth, which acts as the invaginating apex. Over 80 per cent occur in the first two years of life and in the region of the ileo-cecal valve. Paroxysms of pain in a previously healthy child usually initiate the picture. Vomiting follows shortly. Excessive bloody mucus having what Montgomery described as a currant-jelly appearance is passed by rectum or found on the examining finger. About 85 per cent have bloody stools as well as a palpable mass. Immediate operation on diagnosis is indicated. In the Gross series of 702 cases, no etiological reason was found in 94 per cent. Three-fourths of the remaining 6 per cent were caused by Meckel's diverticulum. The mortality has decreased because of early recognition and improved surgical treatment.

Obstruction by foreign bodies. The commonest cause of small bowel obstruction by foreign bodies is a gallstone from an internal biliary fistula. The stone usually obstructs in the terminal ileum. Other causes are enteroliths, meconium and worms. Ultimate relief is from the correction of the underlying difficulty.

Case 14. An obese white female of 62 with a long history of indigestion had complained of increasing abdominal symptoms for one week and had complete intestinal obstruction. A flat film showed typical small bowel obstruction, and a gallstone, a cast from the gallbladder, was found about one foot from the ileocecal valve and removed. There was immediate postoperative shock, but the patient responded from it. She expired five days later of pneumonia, probably due to aspiration.

VASCULAR OCCLUSIVE DISEASE OF THE MESENTERY

Vascular occlusions of the mesenteric vessels usually occur in adults and are either arterial embolisms, venous thromboses, or—most commonly—combinations of the two. The arterial emboli usually result from mural thrombi, from vegetations on the heart valves or from sclerotic plaques. With embolism, the onset of obstruction is sudden, shocking and rapid, with constant abdominal pain and severe exacerbations. There may be bloody stools or emeses, and occasionally there is a diarrhea preceding obstruction. Venous thrombosis, the more common type, has a slower course and usually has complicating liver disease, especially cirrhosis, pelvic or appendiceal infection, or infection from tumors adjacent to the portal

vein. The physical findings are variable, depending upon the extent of bowel involvement and the duration. At first, peristalsis is audible, but later, the abdomen becomes silent, shock increases and there are symptoms of peritoneal involvement. The treatment is resection, if feasible, with primary anastomosis. The outlook, extremely bad in the past, has been improved with a better armamentarium in the postoperative course.

Case 15. A white student nurse, age 19, with a sub-acute bacterial endocarditis of three and a half months' duration was struck with sudden, severe pain in the abdomen low on the right side. She was seen about six days after the onset of her difficulty. The heart was a little enlarged, and there was a systolic murmur at the apex. The abdomen was silent and very tender throughout, with some distention. Exploration showed well over 50 per cent of the upper small bowel involved with early gangrene. Because of her condition and the extensiveness of the lesion, nothing was done. She expired three days later.

HERNIAS

In any series of intestinal obstructions, a large percentage have resulted from strangulated external hernias. In 2,296 collected cases of strangulated external hernias, the percentages were: inguinal 47 per cent; femoral 22 per cent; umbilical 8 per cent; and ventral 3 per cent.

The greatest number of incarcerated inguinal hernias occur in males, and of incarcerated femoral hernias, in females. Umbilical hernias are very common in infancy, but rarely strangulate. Inguinal hernias are also common, and opinions vary regarding incarceration. Gross had a series of 3,874 infantile inguinal hernias with 1.6 per cent incarceration, a rate that is lower than most. Thorndike and Ferguson, with 1,740 cases, reported a 6.0 per cent incidence. The incarceration rate was highest in the first six months and became progressively less.

Case 16. Femoral hernia. A white woman, 72, had a strangulated femoral hernia of three days' duration. The hernia was of long standing. The abdomen was typical of obstruction. A hard, tender, non-reducible mass the size of an ordinary orange was present in the right femoral area. The white blood count was 35,000. About 12 inches of gangrenous ileum was resected, the hernia was repaired and the convalescence was satisfactory.

Case 17. A white male, 79, had had a right inguinal hernia for many years. Five days before admission, he experienced a little difficulty in reducing it, and symptoms of obstruction progressed from that time. He was quite ill, his abdomen was distended and he was very uncomfortable. There was some peritoneal irritation, but no definite mass could be palpated, and there was no evidence of hernia other than the dilated external ring. A small knuckle of lower ileum was found incarcerated in an inverted hernial sac in the peritoneal cavity at the internal ring, having been reduced from the canal. This was freed, and the sac was ligated at its neck. Convalescence was uneventful, until on the ninth postoperative day he died rather suddenly. Autopsy showed a pulmonary embolus. I have had one similar case whose recovery was satisfactory.

Case 18. Inguinal hernia. A white male, 83, had a rather sizable right inguinal hernia, incarcerated for six hours with classical symptoms of obstruction. The indurated mass, the size of an orange, could not be reduced by taxis. An incarceration of omentum and a loop of small bowel were found to be constricted by the external ring. They were freed and reduced, the bowel and omentum being viable. A Halsted type of repair was performed, and the convalescence was uneventful.

Intraabdominal hernia. Intraabdominal hernia is one of the rare causes of acute intestinal obstruction of developmental origin in which the gut is permitted to pass into a sac behind the mesentery.

Most patients have vague digestive complaints for some time, and the diagnosis is not made until obstruction occurs. Reduction is usually not difficult, though gut resection may be necessary. The opening should be repaired if at all possible.

Case 19. Internal hernia. A white male, 29, with attacks of colicky pain in the lower abdomen usually of short duration was seen on occasions by army doctors and never diagnosed. Though he had an appendectomy, the attacks continued. About one year later, he was admitted to our hospital medical service because of an attack which became increasingly severe, with nausea and vomiting. On admision, his white blood count was 22,650. Retrograde pyelograms were normal; urine negative; serum amylase and blood sugar normal. There was no free air under the diaphragm. I saw him after 48 hours, at which time he was in shock, with a systolic pressure of 80 mm. and a pulse of 136. The abdomen was distended, splinted and tender, with marked rebound tenderness. Despite his poor condition, the most likely diagnosis seemed to be a perforated ulcer or acute pancreatitis. When he was explored, the whole jejunum and nearly all of the ileum were found to be incarcerated in a congenital hernial sac to the right and on a level with the ligament of Treitz. The small intestine was gangrenous and filled with unclotted blood. The sac was roughly spherical and measured about 20 cm. across the opening. A catheter was placed in the gut and he was closed. He expired a few hours later.

Congenital atresias are usually present in the upper and lower gastrointestinal tract. Also bands and malrotations of the intestines cause obstruc-

tive symptoms. They usually occur very early in life, and the prognosis is poor.

Sometimes the intestine contains adherent pancreatic tissue mechanically resembling tumors, and though very rarely, annular pancreas does occur, causing duodenal obstruction.

Duplications. Duplications of the alimentary tract consist of structures whose walls are similar to those of any portion of the gastrointestinal tract, not necessarily corresponding to the site at which the involvement occurs. One of them may possess a common wall with the bowel or hang free on its own mesentery. Mid-abdominal discomfort is usually present, and vomiting is an outstanding symptom. The symptoms are those of partial intestinal obstruction, with melena, and at times a freely movable tumor is palpable. A resection of involved bowel is usually necessary in the treatment.

SUMMARY

I. Small bowel lesions, though relatively infrequent, should be considered whenever one undertakes to diagnose the cause for abdominal pain, bleeding or obstruction.

II. A classification of these lesions is offered, and the symptomatology and pathogenesis are discussed briefly.

III. Illustrative cases are presented which emphasize the high incidence of obstruction and the necessity of early intervention.

REFERENCES

1. Shallow, T. A., Eger, S. A., and Carty, J. B.: Primary malignant disease of the small intestine. Am. J. Surg., **69**:372-383, (Sept.) 1945.
2. Picarra, B. J., and Marshall, S. F.: Primary carcinoma of jejunum. S. Clin. North America, **25**:713-718, (June) 1945.
3. Brunschwig, A., and Tiholiz, I. C.: Surgical treatment of malignant tumors of the duodenum, exclusive of those arising from papilla of Vater. S. Clin. North America, **26**:163-175, (Feb.) 1946.
4. Cattell, R. B., and Colcock, B. N.: Tumors of small intestine. S. Clin. North America, **27**:644-650, (June) 1947.
5. Maxwell, E. A., Crile, G., Jr., and Dinsmore, R. S.: Malignant tumors of small intestine. S. Clin. North America, **28**:1149-1157, (Oct.) 1948.
6. Pridgen, J. E., Mayo, C. W., and Dockerty, M. B.: Carcinoma of jejunum and ileum, exclusive of carcinoid tumors. Surg. Gynec. & Obst., **90**:513-524, (May) 1950.
7. Dixon, C. F., and Kratzer, G. L.: Symposium on surgical aspects of cancer problems; unusual problems in surgical management of malignant lesions of gastro-intestinal tract. S. Clin. North America, **31**:1023-1039, (Aug.) 1951.
8. Cooke, H. H.: Carcinoid tumors of small intestine. Arch. Surgery, **22**:568-597, (Apr.) 1931.
9. Humphreys, E. M.: Carcinoid tumors of small intestine; report of 3 cases with metastases. Am. J. Cancer, **22**:765-775, (Dec.) 1934.
10. Freidin, J.: Argentaffin, tumors of small bowel and vermiform appendix. Austral. & New Zealand J. Surg., **22**:231-237, (Feb.) 1953.
11. Oberhelman, H. A., Condon, J. B., and Guzauskas, A. C.: Symposium on recent advances in surgery: leiomyomata of gastro-intestinal tract. S. Clin. North America. **32**:111-122, (Feb.) 1952.
12. Smith, F. R., and Mayo, C. W.: Submucous lipomas of small intestine. Am. J. Surg., **80**:922-928, (Dec.) 1950.
13. Ogilvy, I. H.: Pancreatic tissue in wall of small intestine. Austral. & New Zealand J. Surg., **20**:224-231, (Feb.) 1951.
14. Mayo, C. W.: Surgery of Small and Large Intestine. Chicago, The Year Book Publishers, Inc., 1955.
15. King, E. S.: Diverticula of small intestine. Austral. & New Zealand J. Surg., **19**:301-319, (May) 1950.
16. Mayo, C. W., Baskin, R. H., Jr., and Hagedorn, A. B.: Hemorrhagic jejunal diverticulitis. Ann. Surg., **136**:691-700, (Oct.) 1952.
17. Owen, J. K., and Finney, G. G.: Surgical aspects of Meckel's diverticulum. South. M. J., **42**:98-108, (Feb.) 1949.
18. Brown, R. G.: Meckel's curious anomaly. M. Clin. North America, **37**:227-235, (Jan.) 1953.
19. Bollinger, J. A., and Fowler, E. F.: Results of treatment of acute small bowel obstruction. AMA Arch. Surg., **66**:888-904, (June) 1953.
20. Mussil, J. J.: Symposium on abdominal surgery: intussusception. S. Clin. North America, **24**:203-210, (Feb.) 1944.
21. Oberhelman, H. A., and Condon, J. B.: Symposium on clinical advances in surgery: acute intussusception in infants and children; analysis of 95 cases in Cook County Children's Hospital. S. Clin. North America, **27**:3-22, (Feb.) 1947.
22. Ware, G. W., and Coffey, R. J.: Intussusception in infancy and childhood. Surg. Gynec. & Obst., **91**:173-178, (Aug.) 1950.
23. Jones, J. D. T.: Treatment of irreducible intussusception. Brit. M. J., **2**:1304-1306, (Dec. 12) 1953.
24. Hunt, C. J.: Early indications of adhesive small bowel obstruction. Am. J. Surg., **72**:865-868, (Dec.) 1946.
25. Miller, E. M.: Bowel obstruction in newborn. S. Clin. North America, pp. 73-84, February, 1947.
26. McGuff, P., Dockerty, M. B., Waugh, J. M., and Randall, L. M.: Endometriosis as a cause of intestinal obstruction. Surg. Gynec. & Obst., **86**:273-288, (Mar.) 1948.
27. Coller, F. A., and Buxton, R. W.: Acute obstruction of small bowel. J.A.M.A., **140**:135-139, (May 14) 1949.
28. Fisher, H. C.: Duplications of intestinal tract in infants. AMA Arch. Surg., **61**:957-974, (Nov.) 1950.
29. Crohn, B. B., Ginzburg, L., and Oppenheimer, G. D.: Regional ileitis, pathologic and clinical entity. J.A.M.A., **99**:1323-1329, (Oct. 15) 1932.
30. Kantor, J. L.: Regional (terminal) ileitis—its roentgen diagnosis. J.A.M.A., **103**:2016-2021, (Dec. 29) 1934.
31. Mayo, C. W.: Regional ileitis. Postgrad. Med., **15**:109-113, (Feb.) 1954.
32. Rees, U. L.: Regional jejunitis. Am. J. Surg., **67**:119-122, (Jan.) 1945.
33. Rossmiller, H. B., and Crile, G., Jr.; Surgical treatment of regional enteritis. S. Clin. North America, **28**:1139-1147, (Oct.) 1948.
34. Kiefer, E. D., Marshall, S. F., and Brolsma, M. P.: "Management of chronic regional ileitis." In: Surgical Practice of the Lahey Clinic. Philadelphia, W. B. Saunders Co., 1951, pp. 356-363.
35. Ramey, P. M., and Tabb, K. S.: Symposium in gastrointestinal surgery: lesions of the small intestine. S. Clin. North America, **37**:1457-1473, (Oct.) 1952.
36. Musgrove, J. E., and Seybold, W. D.: Mesenteric vascular occlusion. Coll. Papers Mayo Clinic (1949), **41**:121, 1950.
37. McCarty, W. R.: Management of small bowel obstruction. S. Clin. North America, **29**:307-315, (Apr.) 1949.
38. Alexander, G. H., and Richardson, H. H.: Intra-abdominal hernia; discussion with report of case of incarceration of jejunum into transverse mesocolon. Am. J. Roentgenol., **64**:940-944, (Dec.) 1950.
39. Koontz, A. R.: Femoral hernia—operative cases at Johns Hopkins Hospital during 21 year period. AMA Arch. Surg., **64**:298-306, (Mar.) 1952.
40. Enquist, I. F., and Dennis, C.: Management of strangulating external hernias. S. Clin. North America, pp. 429-439, (April) 1955.
41. Adams, R., and Miller, W. H.: Surgical treatment of intestinal tuberculosis. S. Clin. North America, **26**:656-664, (June) 1946.
42. Gross, R. E.: Surgery of Infancy and Childhood. Philadelphia, W. B. Saunders Co., 1953.
43. Christopher, F.: Text Book of Surgery. Fourth Edition. Philadelphia, W. B. Saunders Co., 1947.
44. Boyd, William: Surgical Pathology. Fourth Edition. Philadelphia & London, W. B. Saunders Co., 1943, pp 311-323; 339-341; 130-131.

INTERNATIONAL COLLEGE OF SURGEONS

The United States and Canadian sections of the International College of Surgeons will hold their twentieth annual congress in Convention Hall, Philadelphia, September 12 through 15. A detailed program can be secured from the Secretariat of the College, 1516 Lake Shore Drive, Chicago 10.

Acute Disseminated Histoplasmosis

Report of a Case in an Adult

CLEMENT A. SONES, M.D., MAURICE J. ROTKOW, M.D., AND ROBERT C. DUNN, M.D.

DES MOINES

No attempt will be made here to discuss histoplasmosis in detail. Recent publications covering the subject are numerous, and a few references will be appended for the reader's convenience.

We are reporting a case of acute disseminated histoplasmosis as our contribution to the rapidly growing list of new cases.

Our patient, an adult, was diagnosed rather early in the course of the disease and was given ethyl vanillate according to the method of Christie[1] without apparent benefit. The details of its administration are to be found in the case report below.

Unfortunately, the mode of contact could not be determined. The patient lived in a prosperous neighborhood and taught in a school situated in one of the finest residential districts of this city. A thorough investigation of her surroundings was made, including soil samples taken from her premises by our city health commissioner, but all efforts to discover the source of the fungus, Histoplasma capsulatum, were unproductive. Nor have there been similar cases to provide us clues. It may be that the infecting organism was air-borne.[2]

CASE REPORT

Mrs. S. G., age 57, a married school teacher, entered Iowa Methodist Hospital on March 2, 1954. Her chief complaints were chills, fever, sweats and a backache of ten day's duration.

Past medical. Tonsillectomy in childhood and thyroidectomy at 22 years of age. She admitted to no previous chronic or severely acute illnesses. She had had no pulmonary infections that she could recall, and had had no contact with tuberculosis of which she was aware. Her children were grown and married. In recent years, there had been no pets in the home, she maintained no garden, and couldn't recall having had contact with fresh soil, caves, damp basements or attics.

Family history. Her father had died at 69 years of age with "an enlarged heart"; her mother had died at 70, of coronary thrombosis; five siblings were living and well; and one brother had died at 62 from "high blood pressure." There had been no lung infections in the family and no chronic diseases aside from those related to the cardiovascular system that have been mentioned.

Fatal illness. Throughout the previous winter months, the patient had been unusually fatigued. For that reason, she and her husband made a seven-day trip to New Orleans at Christmas time to escape the season's extra demands at home. They did very little sightseeing, and their accommodations for food and lodging were good.

In early January, the patient suffered a "head cold" with mild malaise which cleared up in about a week. On February 19 she developed malaise, chills and a mid-dorsal backache. She continued at work, but on February 26 she became extremely fatigued, developed paroxysmal attacks of nonproductive cough and severe night sweats. At our office on March 1, she did not appear acutely ill, and the physical examination was entirely negative except for a temperature of 102°F. and a few fine, moist rales in the right lower thorax, posterolaterally. The blood pressure, blood counts and urinalysis were within normal range. The white blood cells numbered 6,200 per cu. mm. The X-ray film of the chest showed miliary patches of infiltration throughout both lung fields, producing a scattered, snowflake-like appearance. She was admitted to the hospital on the following day for more detailed study and observation.

The symptoms during the first few days of her hospitalization were the same as those noted above, except that there was, in addition, a diarrhea of short duration. Her cough had subsided temporarily, so that four days passed before a satisfactory sputum specimen could be obtained. In fact, in view of the chest X-ray finding, there was a surprising paucity of respiratory symptoms.

During the patient's first few days in the hospital, her temperature fluctuated erratically, from 99.8° to a peak of 105.4°F. Following the sixth day, however, it was of the septic type, the spike appearing with the chill around 8:00 p.m. The fall, however, was gradual, reaching subnormal levels at about 8:00 a.m.

The physical examination revealed no positive findings other than a temperature of 102.4°F., a slight increase in pulse rate and a few rales in the posterolateral base of the right lung. Weight was 125 lbs.; blood pressure 120 systolic and 60 diastolic; hemoglobin 12.6 Gm. per 100 cc. of blood; red blood count 4,250,000; and white blood count 5,100, with 67 per cent neutrophils, 16 per cent lymphocytes, 11 per cent band cells and 6

per cent monocytes. The urine was slightly cloudy. Its specific gravity was 1.023, and there was 0.01 Gm. albumin, but no sugar. In the high power field there were 2 to 3 leukocytes, 1 to 5 erythrocytes and an occasional hyaline cast. The serology (V.D.R.L.) was negative. The roentgenogram of the chest was interpreted as follows: "Heart shadow normal in size and shape. There is extensive miliary infiltration in each lung and some increase in density of the right hilus representing an extensive inflammatory process such as tuberculosis or fungus infection. However, lymphogenous metastasis or primary alveolar cell carcinoma cannot be ruled out."

On March 6, the sputum smear was negative for acid-fast bacilli, as was the culture reported later. The stools were negative for parasites. Agglutination tests for typhoid, paratyphoid, proteus OX 19, brucellosis and mononucleosis were negative. Blood cultures were negative, and no malarial parasites were found in the blood smears.

During the early period of observation, the various antibiotics such as penicillin, streptomycin, Terramycin, Ilotycin, etc. were administered either singly or in combination, but they had no apparent effect on the course of the disease. During the second week accompanying the septic fever, the breath became foul, and within 24 hours (March 11) there was slight icterus. On the following day the liver was palpable and tender, and the cephalin-flocculation was reported four plus in 24 hours, and the white blood count was 8,400, with 74 per cent neutrophils, 15 per cent lymphocytes, 10 per cent band cells and 1 per cent monocytes. On March 14 the total serum bilirubin was 2.6 mg. per cent (1.3 direct), and the thymol turbidity revealed 18 units. The spleen was not palpable, and there was no detectable adenopathy. The patient was quite comfortable, optimistic and surprisingly symptom-free. Her appetite was satisfactory, and there was no digestive disturbance. Because the diagnosis of acute infectious hepatitis was not consistent with the type of fever curve, we started her on a course of emetine and chloroquine, ignoring the chest X-ray findings, but at the same time making skin tests with histoplasmin and coccidioidin. The former of these two tests was positive. This was followed by a complement-fixation for histoplasmosis, which was positive in dilution of 1-512 and negative for amebiasis. At that time the sputum culture still showed no growth, and blood and bone marrow studies were of no help. But a presumptive diagnosis of acute disseminated histoplasmosis was made.

The anti-amebic therapy was continued for two reasons: (1) the presumptive diagnosis could easily be wrong, and (2) in case the presumptive diagnosis were correct, the poor prognosis justified any untried course of therapy. The emetine was given in one-grain doses daily for ten days, and the chloroquine was given concurrently in 0.25 Gm. doses, four times a day for two days, then three times a day for a total of 15 days. During the first 48 hours of this medication, the patient's temperature dropped from 105.2° to 100.4°F., and it did not rise above 102.4° throughout the next three weeks. Immediately, also, the liver began to diminish in size, the icterus faded, and on March 20 the thymol turbidity was 13 units and the total serum bilirubin 1.8 mg. per cent. Hemoglobin was 11.3 Gm. per cent, red blood count 3,900,000, and white blood count 5,000, with 62 per cent neutrophils, 20 per cent lymphocytes, 16 per cent band cells, 1 per cent monocytes and 1 per cent eosinophils. The neutrophils showed toxic granules; platelets were adequate. The urine findings were unchanged. On March 29 the total serum bilirubin was 0.8 mg. per cent, and the thymol turbidity was 8 units. The roentgenogram of the chest showed no significant change when compared with the film made upon admission. Total serum protein was 7.7 Gm., of which the albumin fraction was 3.8 Gm. and the globulin 3.7 Gm.

Following a sternal puncture procedure on April 4, the patient's temperature began another continuous series of daily spikes up to 103.5° and 104°F. A transfusion of 500 cc. of whole blood was given, but it had no effect upon the temperature curve. It should be mentioned that blood transfusions were given throughout the course of the disease whenever a moderate anemia developed or whenever there was an extreme temperature rise.

On April 7 the laboratory reported that a sputum specimen which had been cultured for 30 days was positive for H. capsulatum. The patient was still free of pain. She had a mild, dry cough, a fair appetite and no gastrointestinal disturbances. She was mentally alert and still optimistic. On physical examination there was evidence of moderate weight loss, and during the five weeks of our observation the rales had gradually increased from a few fine ones in the lower right chest to harsh, coarse, dry ones throughout the chest. Still, the spleen and lymph nodes were not palpable. It was then that a course of ethyl vanillate was decided upon, as first used by A. Christie at Vanderbilt University. With energetic cooperation from the Department of Biochemistry, we set up the procedures for the determination of blood levels of that drug, so that the medication could be started on April 20. The patient received 15 Gm. the first day, and thereafter the total dose was increased each day by 3 to 6 Gm. The drug was given in 0.5 Gm. capsules every four hours. Ethyl vanillate blood level determinations were made daily, just preceding the morning dose. Every effort was made to keep the blood level between 20 and 30 mg. per 100 cc. of blood, but the patient's maximum tolerance for it

varied daily between 26.5 and 36.5 Gm. This produced an ethyl vanillate blood level ranging from 16.8 to 35.5 mg. per cent, with an average of 20.5.

On this regimen, the temperature peak declined from 103.6° to 101.6°F. during the first five days, but then it again ascended to 103° and 104°F. On the seventh day, the patient became drowsy, and 48 hours later her mouth became so dry that swallowing was difficult. The tongue was moderately coated with a whitish-gray material, and the margins were red and nontender. There was no essential change in the general physical findings. Throughout the remainder of the course, the drowsiness and the dry mouth continued with little change until the twenty-ninth day of the administration of the drug (May 20). Then the patient became extremely weak and languid. There was tenderness again in the right upper quadrant of her abdomen, and palpation showed that the liver was definitely more enlarged than it had been. For the first time, there was evidence of ascites. There was a fullness and dullness to percussion over the flanks, and a fluid wave was present over the lower abdomen. The next day there was icterus, the urine was dark and the stools were clay colored. Serum bilirubin was 16.4 mg. per cent, and the cephalin flocculation was 4 plus in 24 hours. The ethyl vanillate was discontinued, and the patient was given a blood transfusion. At no time during the illness did the white cell count fall below 5,150.

Although atabrine has been known to produce hepatic damage in sensitive individuals, it was given a trial in this case, but with faint hope for success. Immediately following the withdrawal of ethyl vanillate, 3 grains of atabrine were given every six hours for five doses, and then 1.5 grains were given three times a day for six days. There was marked xanthemia due both to the marked jaundice and to the atabrine deposition in the skin. Near the end of the course, the patient became badly confused and semi-comatose, and on June 4 there was abdominal pain and hematemesis. Bloody mucus strings predominated in the vomitus. On June 5, the pulse became thready and rapid, coma ensued and the patient died.

Six hours before death, blood specimens revealed the following: hemoglobin 10.6 Gm., red blood count 3,800,000, and white blood count 6,600, with 86 per cent neutrophils, 3 per cent lymphocytes, 9 per cent band cells, and 2 per cent monocytes. There was slight hypochromia and moderate anisocytosis and poikilocytosis. Total serum bilirubin was 44.8, with direct 29.2 and indirect 15.6. Serum protein total was 6.8 mg. per cent. The albumin fraction was 2.8, and the globulin was 4.0 mg. per cent. The prothrombin activity was 38 per cent of normal. The guinea pig inoculation was reported negative for M. tuberculosis.



Figure 1. The caseous granulomatous areas are seen on the subpleural parts of the lung, but in the picture are not apparent on cut section at upper left, though they are present in large numbers. Numerous intracellular Histoplasma capsulatum organisms are present. Cf. Figure 5.

PERTINENT AUTOPSY FINDINGS

At autopsy, the skin presented a deep orange-red color which apparently was the result of a combination of deep jaundice, atabrine therapy and pinkish colored embalming fluid used in a light arterial injection. The body showed evidence of recent weight loss, but it was not emaciated. There were no lesions involving the skin, and no peripheral lymph nodes were palpable. There were no oral lesions, but there were many raised, superficial ulcerations of the mucosa of the epiglottis, trachea and bronchi. The mucus in the trachea was bloody, as was that of the esophagus. The heavy, gray lungs filled the thorax and felt shotty on palpation. The right one weighed 500 Gm. and the left 600 Gm. The peritoneal cavity contained almost 800 cc. of clear, yellowish-orange fluid. The liver and spleen were enlarged, weighing 2,200 and 500 Gm., respectively. On the liver surface, granulation tissue appeared in a lacy pattern suggesting, at first glance, a severe chronic passive congestion—"nutmeg liver." The gastric contents were bloody, and the gastric mucosa presented membranous, necrotic superficial ulcerations in patchy areas. Lymph nodes in the connective tissue about the thoracic and abdominal aorta and pancreas were enlarged to one or two centimeters in diameter. Mesenteric lymph nodes were firmer, but only slightly enlarged. The ad-



Figure 2. Small button-like lesions in the mucosa of the epiglottis, trachea and right main bronchus at its origin. Numerous Histoplasma capsulatum organisms are present.

renals were normal in appearance, but a few tiny (2 mm.), gray, soft foci were noted on cut section.

On microscopic examination, a granulomatous, chronic inflammatory process was found in the mucosa of the epiglottis, trachea, bronchi, lungs, lymph nodes, liver, spleen, adrenals and vertebral bone marrow. Wherever this process occurred, it was remarkably uniform, and in all these poorly defined areas, numerous macrophages and multinucleated giant cells were noted. A few to numerous small (1 to 5 micra) H. capsulatum organisms were found in these cells. Small to medium sized areas of caseation necrosis were encountered frequently in the larger granulomatous areas of the *lungs, lymph nodes* and *spleen.*

The sections through the raised and superficially ulcerated mucosal lesions of the *trachea, bronchi* and *epiglottis* were not caseous, but contained many intracellular organisms. About half of the total *liver* volume was accounted for by the interconnecting broad bands of granulomatous, organism-laden tissue that seemed primarily to involve the portal areas. Inspissated bile pigment was occasionally seen in adjacent canaliculi. There was some shrinkage of the cord cells in the intervening liver tissue, and an occasional Kupffer cell was filled with organisms. The follicles of the *spleen* were small, and the germinal centers inactive. Relatively few mononuclear cells were found in the stroma of the red pulp. Many organisms were seen in the medium-sized, scattered masses of granulomatous tissue that replaced about 10 per cent of the spleen parenchyma. Sections of the *adrenal glands* revealed small granulomatous foci in the cortex. Similar small foci occurred in the *bone marrow* (lumbar vertebrae). In both the adrenals and the marrow, scattered



Figure 3. The lace-like whitish-gray structures in the liver are granulomatous tissue in which numerous organisms are found.

enlarged reticuloendothelial cells contained organisms. The mesenteric lymph nodes revealed neither granulomatous tissue nor organisms. There was a membranous, necrotic superficial ulceration of the stomach mucosa in patchy areas, but there were no organisms or granulomatous tissue. A few benign adenomas were noted in the thyroid gland. The *kidneys, heart, brain, uterus* and *ovaries* showed no significant pathologic change.

COMMENT

At the time the diagnosis was made, this was thought to be Iowa's first case of acute disseminated histoplasmosis diagnosed before death. Although it required 30 days to identify the disease positively, the patient lived another 60 days during which time therapy could be tried. Ethyl vanillate produced distressing side effects in the form of dry mouth, nausea, vomiting and cerebral disturbances, and it is probable that it finally produced the terminal hemorrhagic gastritis and bronchitis. Emetine and diodoquine may have had a favorable influence on the course of the disease, but if so, it was not a striking one.

General adenopathy and splenomegaly were not detected in this case before it came to autopsy. The lymph nodes were only slightly enlarged, and the spleen moderately so, and neither was palable at any time. Nor were there any oral lesions to



Figure 4. Small focal masses of granulomatous inflammation are to be seen in the spleen throughout its substance. Many organisms are present.

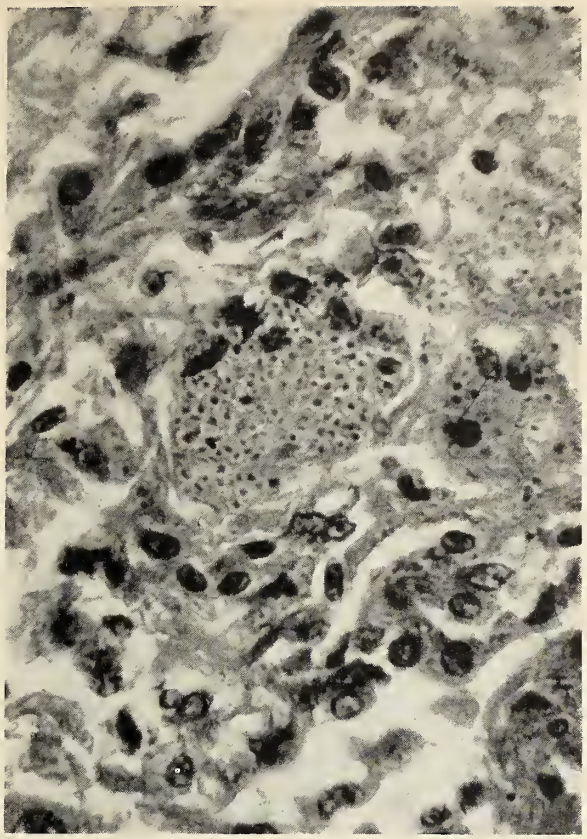


Figure 5. The microscopic (430 X magnification) appearance of the granulomatous tissue and the intracellular Histoplasma capsulatum organisms are demonstrated in lung tissue in this photograph. However, the chronic inflammatory process in other organs is basically similar to this. Caseous areas are often seen.

aid in the clinical solution of the problem. Also, this patient falls into a group thought to be seldom attacked by this disease—namely, females in the fifth or sixth decade of life.

The only early clue to the diagnosis was provided by the characteristic pulmonary findings on the X-ray film. The final diagnosis had to await the results of culture studies, and this fungus is slow to grow.

CONCLUSIONS

Acute disseminated histoplasmosis is a new disease in Iowa. In sharp contrast to the more common benign form, it is usually fatal. Although new antibiotics and drugs with fungistatic properties are being developed for possibly effective control of this disease, at present the treatment is nonspecific and disappointing. Supportive therapy in the form of blood transfusions seems to offer most. In controlling the anemia and leukopenia, there is at least reasonable hope for a remission.

It seems entirely plausible, since penicillin is used in the media for culturing these fungi, that bacterial antibiotics are actually contraindicated

in this disease. By their administration, we may be restraining the natural enemies of the fungus and thereby promoting the disease.

The disease has a predilection for infants, but it may attack adults in middle age or above who have had no apparent contact with soil, susceptible animals, damp basements or dusty attics.

The final diagnosis must rest on reports from the X-ray and laboratory departments of the hospital, but the clinician must first suspect this disease in order that the proper procedures can be set up for a diagnosis. A roentgenogram of the chest is the most likely means of arousing an early suspicion.

BIBLIOGRAPHY

1. Christie, A., Middleton, J. G., Peterson, J. C., and McVickar, D. L.: Treatment of disseminated histoplasmosis with ethyl vanillate. Pediatrics, **7**:7-18, (Jan.) 1951.

2. Ibach, M. J., Larsh, H. W., and Furcolow, M. L.: Isolation of Histoplasma capsulatum from the air. Science, **119**:71, (Jan. 8) 1954.

3. Monroe, J., and Kurung, J. M.: Histoplasmosis, with review of literature and report of case proved by culture, with involvement of upper lobe of each lung simulating active bilateral apical pulmonary tuberculosis. Ann. Int. Med., **38**:206-223, (Feb.) 1953.

4. Darling, S. T.: Protozoon general infection producing pseudo-tubercules in lung and focal necrosis in liver, spleen and lymph nodes. J.A.M.A., **46**:1283-1285, (Apr. 28) 1906.

5. Darling, S. T.: Morphology of parasite (Histoplasma capsulatum) and lesions of histoplasmosis, a fatal disease of tropical America. J. Exper. Med., **11**:515-531, (July) 1909.

6. DeMonbreun, W. A.: Dog as natural host for Histoplasma capsulatum; report of case of histoplasmosis in this animal. Am. J. Trop. Med., **19**:565-587, (Nov.) 1939.

7. DeMonbreun, W. A.: Cultivation and cultural characteristics of Darling's Histoplasma capsulatum. Am. J. Trop. Med., **14**:93-125, (Mar.) 1934.

8. Dodd, K., and Tompkins, E. H.: Case of histoplasmosis of Darling in an infant. Am. J. Trop. Med., **14**:127-137, (Mar.) 1934.

9. Conant, N. F.: Cultural study of life cycle of Histoplasma capsulatum Darling 1906. J. Bact., **41**:563-579, (May) 1941.

10. Loosli, C. G.: Histoplasmosis: some clinical, epidemiological and laboratory aspects. M. Clin. North America, pp. 171-199, January, 1955.

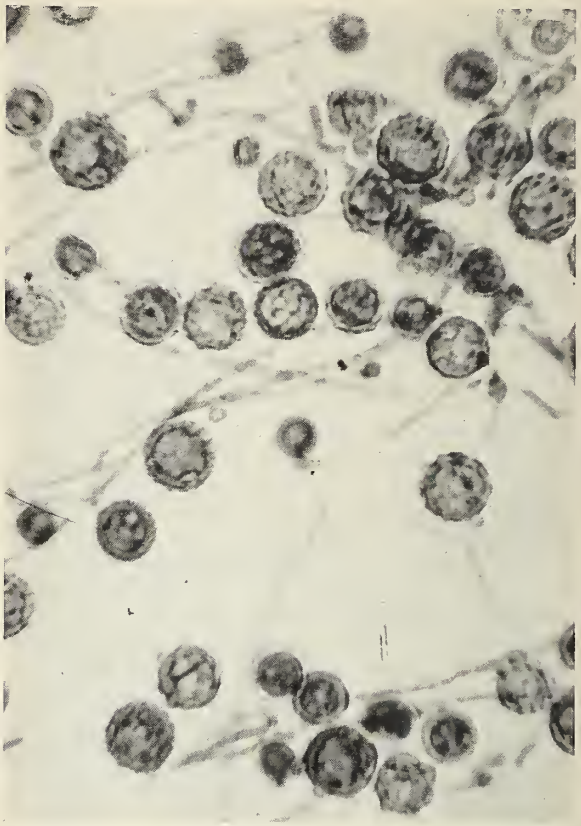


Figure 6. Large, thick-walled, round tuberculate chlamydospores of Histoplasma capsulatum from Sabouraud's glucose agar medium. (970 X magnification)

A Substitute for the Doctor Draft

Mr. Gerald G. Gross has said in his August 15 newsletter WASHINGTON REPORT ON THE MEDICAL SCIENCES that its backers in the military establishment believe the "Grenville package plan," if fully implemented, will make the drafting of physicians and dentists completely unnecessary.

Rear Admiral E. W. Grenfell, a line officer, chaired an inter-service committee appointed to investigate the mass resignations from Army, Navy, and Air Force regular medical and dental corps, and to recommend ways of remedying the difficulty. His committee's report described career military doctors as "a vanishing race." In a recent 21-month period, it had discovered, one-third of regular medical officers eligible to resign had done so. The No. 1 incentive for keeping physicians in the military, the Grenfell committee decided, is more money.

The "package plan" calls for inducements starting in the third year of medical school and continuing throughout the officer's military career. (1) Medical and dental education would be subsidized, both at the undergraduate and residency levels. (2) Rank given beginning physicians voluntarily entering the service would be higher than at present. (3) Active duty pay and retired pay would be raised. (4) Bonuses of up to $1,800 would be paid to men volunteering to serve three to nine years. (5) Optional retirement would be assured after 20 years' service. (6) The military doctor's professional status would be elevated and improved.

Although, at least nominally, the Grenfell committee was set up by all three military services acting together, Mr. Gross says that the Army cooperated reluctantly, and is now unenthusiastic about the committee's recommendations. The Navy has just announced a senior medical student program, as a starter, and the Air Force reportedly is working on procurement inducements of its own. But Mr. Gross says it is suspected that the Army would be content simply to have the $100 monthly special pay increased.

What Your Blue Shield Means to You

FRANCIS T. HODGES, M.D.

SAN FRANCISCO, CALIFORNIA

The history and evolution of Blue Shield, both locally and nationally, are so familiar to us who have practiced a few years as to seem hardly worthy of repetition. But, because Blue Shield has been with us these several years and because it has operated and survived a period of good times—and sometimes of lean—it seems to have earned the right to a critical and careful analysis.

What is it about this movement, initiated by the medical profession itself, that has stimulated the lay public to seize from us the initiative to carry it far beyond our original plans, until today over 30,000,000 Americans subscribe? It is just that we have offered them something they have needed and have hoped for. It is that our profession, breaking with tradition, has led, rather than followed, and, by openly blazing the trail in medical economics, has shown the public that it is concerned with more than the mere practice of medicine. To me, it is significant beyond words that Medicine is desirous of rendering more than the proper diagnosis and the correct treatment. It has at last achieved a realization that its duty does not end with a righteous satisfaction in having offered the best possible medical care in the world. We have shown that this satisfaction is only empty cynicism unless physicians are prepared to see that it is delivered within the economic capabilities of all Americans.

As a large, overgrown, well-meaning youth, I was often somewhat like a St. Bernard pup that wishes to be a lap dog. I bowled over those whom I wanted to love me. I flattened those I would have helped. I alienated those I would have aided. And in my wake lay a bewildering succession of wrecked china shops that would have aroused the envy of a bull. I believe *schlemmiel* is the word that would best have characterized me. The sharper critics of the medical profession have often so designated us physicians as a group. And yet, though in our naivete we may fail to realize it, we have of our own volition conceived and produced, in our Blue Shield movement, something so advanced and progressive that we are leaders, rather than reactionaries. The outsized youth of yesterday who knew not his own strength should awaken to his maturity and to the significance of that strength. No flexing of muscles is needed, only continued demonstration that they are being used for the common good.

Dr. Hodges has been a member of the National Blue Shield Commission since 1951, he is a member of the Prepaid Medical Care Committee of the American Academy of General Practice, and he is president of California Physicians Service.

PREPAYMENT MEDICAL CARE HAS COME OF AGE

Prepayment of medical costs is not completely new. Even compulsory government medicine is not. Germany, under Bismarck, started that during the Nineteenth Century. Prepayment, in one form or another, without government compulsion has existed on a small scale in this country for a good many years. In fact, the undesirable features of certain closed-panel types of practice gave rise, in the State of Washington, to the first plans that approximate today's Blue Shield principle. Doctors in that state, finding the tyranny of the all-powerful lumber companies intolerable, responded by the formation of medical service bureaus. They refused to tolerate the abuses that arose when paternalistic and autocratic firms dictated to their captive doctors the nature, the quality, the quantity and the occasion of medical care. The company gave, the company withheld, or the company took away. Whim, caprice and selfish interest determined how, when and if the so-called beneficiaries were to receive their "benefits." Furthermore, the company designated the physician who was to render this care, and outlined the exact manner. Any option to be exercised was to be solely that of the company. If there ever existed a horrible example of the evils that can result when doctors lose control of the practice of medicine, this was it. Company doctors, in company towns, always aware of the buttered side of their bread, quickly learned that their prime concern in practicing their profession must always be to follow the company's dictates. This applied invariably, whether they were paid by salary or by capitation. And, no matter how benign an individual company might have been, one can conceive of the vast amount of discontent that existed among the physicians and the patients consigned to them.

A little reflection upon the possibilities in this sort of absolutism will soon make apparent the despotic state that prevailed.

Lest what I have been describing be thought no more than past history, corrected now by the resulting reforms, let me remind you that a vassalage of similar structure is maintained by the United Mine Workers. Labor, in that present instance, has captured the doctors, and they must dutifully dance to the tunes called by the bosses. One can be certain that medical decisions are carefully refereed.

The subservient company doctor is not extinct, either, despite bold action by a profession as

determined as that in the State of Washington. The obedient closed-panel puppet M.D. is to be found in numerous parts of the country, his counsel to patients muffled by the baffles and filters interposed by the employing corporation.

Let us return to the aroused physicians of the Northwest, who asked themselves by what right the lumber industry was engaging in the practice of medicine. These doctors did not then originate the trite cliche, "Why should we be in the insurance business?" They restored private and free practice by devising agencies that permitted patients, as individuals, to prepay the costs of their illnesses and to select their own physicians. No longer had the patient any need to feel that his care was the result of company largess, nor the physician to feel that he was a chattel of the employer.

It is inadequately known in most parts of this country that there in the State of Washington the ideas were originated which elsewhere were to grow as Blue Shield. Few areas enjoy such full support, lay and professional, for prepayment plans. This support stems largely from the still fresh memory of what prevailed before the profession itself acted to regain control of medical practice.

When a great need exists, the means of fulfillment seem to spring variously, in many locations and in many ways. So it was with the concept of prepayment. The early beginnings of this movement, except in the Pacific Northwest where evolution proceeded somewhat independently, were largely influenced by the great depression. The plight of the lower income people was real. Mere existence was a daily problem. Family budgets were shattered. Confrontation with a large medical bill represented immediate fiscal disaster —and it still does.

American pride being what it is, few were willing to pauperize themselves, for the resistance to herding into charity clinics is strong. Given the chance and shown the way, Americans deeply desired to pay for their medical care, and to obtain it where they chose. They were willing to pay certain regular amounts for it, but few were able to set aside reserves against major illness. The insurance industry had given little concern to these needs. Rumblings about socialization grew louder and louder.

It is often remarked that the medical profession devised Blue Shield to thwart the socializers. And some cynics, even some within the profession, insist that Blue Shield should quietly expire once it has served that purpose.

PROGRAM SHOULD BE BROADENED

True idealism exerted an influence beyond that of expediency or opportunism. As a charter member of one such plan, I know sufficient of the founding to be convinced of the high principles of the founders and of their intentions as to be sure of their purpose that what they established should be permanent, should grow and should be available to all who needed it. I am certain that they never conceived of it as limited only to a small or token segment of the populace. I am positive that their purpose was more than that Medicine should make a magnanimous gesture to salvage a group of near-mendicants from economic no-man's-land. I know that they wanted this to be a profoundly useful instrument for both Medicine's and the public's good.

That Blue Shield and Blue Cross have grown as fabulously as they have should be a source of great pride and satisfaction to our physicians and hospitals. Our faith in our venture has been reaffirmed many times over. What we have offered has been recognized as infinitely good.

One hears occasional expressions of alarm that we have created a Frankenstein monster which will destroy us, or that we have parted with our freedom. On the contrary, we may very well have *salvaged* our freedom, and our creation, most likely, has preserved for us, and for the public, the best form of medical practice. We have offered the public what it has shown it wants.

It may be granted that the original scope of Blue Shield was to provide means of prepayment for lower income families. There was no better place to start. But it is difficult to understand what objection there can be to coverage by the medical profession itself of the vast middle class, who also earnestly desire aid in budgeting their sickness costs.

There are many reasons why Blue Shield should embrace a very representative cross section of the American public, if it is to exist at all and operate efficiently. Some of these reasons bear directly upon the relationship between Blue Shield and the commercial insurance companies in the field.

It was Blue Shield and Blue Cross that awakened the insurance industry to the need for coverage of sickness costs. Even more important, their competition has caused this industry to adopt realistic rates. Among other things, better insurance returns to the doctors have resulted.

Competition is a regulator, an equalizer, and the great commercial insurance companies have an undoubted place in medical economics. But since we in medicine *do* have a program, and, presumably, support it, let us not be so completely benign in our attitude toward commercial insurance that we fail to see the necessity for some measure of rivalry between them. The two can live in peace, for each has its more or less separate market. But if our own plans are to flourish, the private firms must not be permitted a monopoly of the preferred risks. Insurance companies

operate for the purpose of making money for their stockholders. It is natural that all of their operations are conducted for profit—an objective that precludes coverage of the aged and special groups such as indigents, itinerants, etc. People of those sorts can, under certain conditions, be written under Blue Shield, but our plans can't survive if that is the only kind of business that is left for them to do.

Recent critical analysis of certain large companies in the health insurance field led to government censure, thus demonstrating the extremes to which the profit motive can be carried.

If Blue Shield is to remain a flourishing and successful public service—for such it is—its market cannot have all of the cream skimmed from it by private insurance. Blue Shield is a public service because the "community rate" principle can operate, permitting broad protection of many people, including some of the B-grade risks, who desire protection at least as much as the A-1's. Two vital factors are responsible for Blue Shield's success with this "expanded risk" coverage. The first is the not-for-profit structure. In a neighboring state, a large private company pays out only 40 or 50 per cent in benefits. I can cite certain large ones that pay only 30 per cent. Compare those figures with Blue Shield's average of about 91 per cent. The second factor is the service principle, which only the doctors can underwrite, since only they, as the guarantors, can render the service.

With not-for-profit operation, a community type of rate, and the service principle, Blue Shield can operate as an extremely valuable public service. A high level of physician cooperation, and active, enthusiastic support are essential. If the profession is completely docile in its attitude toward commercial competition, it may thereby assent to the emasculation of its own Blue Shield plan. The insurance companies have no interest in the corset shops, the middle aged or groups that are traditionally heavy users of benefits. Consequently, they have no desire whatsoever to compete with us for the privilege of underwriting these latter. But, if they are all that are left for us to write, our community rate will be lost by the wayside, and our coverage of the poorer risks, assuredly always somehow a responsibility of the profession, will become impossible at prices which the insured can pay. Then, once more, the reformers will be crying that Medicine shuns its responsibilities. It is our duty to see that we are aggressive in our support of Blue Shield and that we uphold it in competition. When professional members attend meetings of labor groups and are given opportunities to explain Blue Shield, they have superb opportunities to be of service. Blue Shield is represented as "the doctor's plan"—which it is—but its effectiveness depends upon the proud self-identification of the doctors with their plan. When it is properly conducted, it is also "the public's plan."

DOCTORS SHOULD GET FULL FEES

Blue Shield is not a one-way street. The benefits go to the patients, and they must be generous. But the fees go to the doctors, and they must be realistic. Most Blue Shield plans operated at great sacrifice to member physicians during their early years. By accepting reduced fees, the doctors underwrote the ventures until they could become financially secure. Almost all plans have grown to maturity, are sound and have reserves. The day of early sacrifices by the doctors ought, by now, to be no more than a memory. It should not be supposed that doctors are entitled to no more than substandard fees simply because a Blue Shield plan is paying them and because some of the patients involved would have been charged little or nothing if it weren't for the plan.

Continuing support of Blue Shield should not be expected of Medicine merely upon the basis of idealism and adherence to a lofty principle, praiseworthy as it may be, for the doctor is confronted by his own hard economic facts. Doctor discontent with Blue Shield has been found to be in inverse ratio to fee payments. When a doctor is pledged to support his Blue Shield, but cannot receive a fee approximating a proper one, he may feel that he has sold himself down the river. His lack of praise for his plan mystifies his patients, and we can be certain that when the local leatherworkers' union meets to consider prepayment coverage, he will not be there to speak for his Blue Shield.

Thus, it is mandatory that all plans reconsider the subject of fees. There are many inequities. Many fees have been established by caprice, on a purely arbitrary basis. The sums allowed for various procedures are frequently disproportionate. Without serious study, a fee-schedule committee has set the recompense for a certain service on the basis of what was left in the kitty after the other fees were decided upon. Often a member of such a group, ruling upon fees in a branch of the profession other than his own, has downgraded the other fellow because of his conviction that doctors in that other branch of medicine are, in general, overpaid. Yet, as the result of the study of fees paid the country over, some order is being arrived at. Both in Connecticut and California, serious studies of *relative* values have been made. They are worth examination, for unit values may then establish how many tonsillectomies equal a cholecystectomy.

At the beginning, most Blue Shield plans concerned themselves only with surgical coverage, and even today some do not underwrite medical benefits. The reason for the present weighting of schedules in favor of surgery is probably to be

found in those historical facts. It is true that medical services tend to be slighted. The inequity should be corrected if physicians who do not perform surgery are to be more than lukewarm toward Blue Shield.

As I have observed, fees must approximate the usual in a community. The more the various plans get on their feet financially, the more this can be. With non-profit structure, they should be more certain of paying proper fees than a company that must satisfy its stockholders. An interesting sidelight was the experience of a Western state. The fee-schedule committee was considering increases in payments to the doctors when a delegation arrived from a county society, pleading that Blue Shield not raise its fees any more because the entire medical economy of the community would be upset. Blue Shield was already paying fees normal to that area, and a rise would place Blue Shield *above* the prevailing rates.

It is my feeling that subscribers desire their physicians to be paid normal fees. They should understand the relationship between their own premium rates and proper fees for their doctors. Of course, we shall always be confronted with market resistance, and there are rates beyond which subscribers will not go—at least in their present state of information regarding the facts of pre-payment for medical costs. Medicine, through Blue Shield, confronts a task of education. A public that asks for more and more coverage—and should have it, I believe—must be taught just why each additional benefit will cost an additional premium. Another of Blue Shield's responsibilities is to tell the public about the benefits that are offered. Benefits, limitations, exceptions—all must be clearly spelled out, and the doctor must not be left the job of referee or interpreter. It is that sort of burden which has alienated many physicians.

EXCLUSIONS MUST BE RESCINDED

Bewildered people will not remain champions of Blue Shield. When the exclusions, limitations and escape clauses loom larger than the benefits, subscribers become unable to distinguish Blue Shield contracts from those of the sharp-practicing, barely legal commercial firms. In some cases, I feel, Blue Shield plans have based their contract structure on what they would *not* cover, and on ways of protecting themselves against losses. Then they have cautiously appended benefits until the expected premium pool was earmarked. I know that there must be protection against abuses and disastrous losses. But there are certain subtle differences of attitude that make for a far healthier approach when planning is based upon a desire to provide the very maximum that can be offered. Now is a time for boldness and imagination in conceiving a form of protection that is far reaching, broad, and satisfactory to physician and patient alike. An income ceiling that is so low as to make the plan cover very few people is unrealistic and is likely to make the public regard Blue Shield as no more than a cynical gesture by a profession that wishes praise for a service it isn't really rendering. A realistic income ceiling, a realistic return to the doctor and broad coverages would mark the beginning of a new day in Medicine's public relations.

It is my feeling that with education of the public in the purposes and principles of pre-payment and with greater understanding—hence greater support—from the profession, there can be a considerable relaxation in the controls by which many plans undertake to prevent overuse and abuse. If each patient and each doctor felt individual pride of ownership in his Blue Shield, so that he regarded abuse of the plan as an injury to something that belonged to him, there would be an end of cautious and suspicious attitudes in the plan offices. Then, instead of the obvious and annoying stop-loss gimmicks which imply that everyone is dishonest, we could see emphasis put upon what the subscriber is entitled to—rather than upon what he may not have. The public would be happy to see less "veto power."

INTER-PLAN CONTRACTS MUST MULTIPLY

All Blue Shield plans have arisen as local operations, and they remain locally autonomous, as they should be, like our 48 states. There is the National Blue Shield Commission as a coordinating body, and much vital cooperation between plans can thus take place. Exchange of information, mutual research, transfers between plans and the writing of interplan contracts would be difficult without this unifying body. As more and more national contracts are written, this interplan cooperation will grow in importance. In fact, the whole future of Blue Shield and Blue Cross may depend upon our ability to write these national contracts. If purely local interests stand in the way, then millions of persons who should be covered by Blue Shield and Blue Cross will look elsewhere. If private insurance companies succeed in writing nationwide contracts, we cannot because of these strictly local interests, we may be disappointed and embarrassed. But closed-panel groups may also find these contracts to their liking, particularly when their proponents have close friends in Washington. This threat is not a remote one, as California physicians can tell you. But more important, the significance of a major failure of Blue Shield or Blue Cross would be tremendous. The social planners would resume their drive for Government medicine with new vigor.

Frequently I hear colleagues refer to Blue

Shield as "that great laboratory for experimentation in medical economics." The time has long since passed when the subscriber felt that his premium was a research grant. And the practicing physician, to whom the Blue Shield dollar, year by year, is representing a larger and larger part of his income, now is reluctant to find that dollar a discounted one. He has a right to a fair return for his work. The patients have a right to guaranteed services. Neither should be a laboratory animal. Blue Shield is big business now. It is a great and responsible public trust. All have a right to expect certainty, consistency, stability and reasonable permanence.

Statistics on 100 Cases of

Retinal Detachment Surgery

ALSON E. BRALEY, M.D., and H. B. OSTLER, M.D.

IOWA CITY

The results of surgery for detachment of the retina are both disappointing and gratifying. An operation that the surgeon regards as successful may be disappointing or seem unsuccessful to the patient. On the contrary, a result that disappoints the surgeon may gratify the patient very highly.

In reporting results of surgery for detachment of the retina, one can divide the cases into the favorable and the unfavorable and then tabulate the results. For this study, we have taken consecutive cases and have included unfavorable as well as favorable ones in the survey. When a patient presents himself for treatment and has asked to have surgery, we have consented to undertake it, even though the prognosis was unfavorable.

The diagnosis of the type of detachment and the differential diagnosis will be discussed in another paper. This report summarizes the preoperative findings, the operations and our evaluations of the results. The 100 cases include all detachments in this series, whether the lens was present in the eye or not. A single operative technic was used upon all of the patients, one in which we used electro-coagulation of the sclera around the holes or tears in the retina in an effort to seal these zones.

OPERATIVE TECHNICS

In brief, the conjunctiva is opened, and one or more extraocular muscles are resected from the globe. A 1.5 mm. Walker or Pischel pin is inserted into the sclera with the coagulation current from the Thermophore* instrument. By measurement and judgment, the pin is placed as close as possible to the hole or tear in the retina. The fundus is examined with the hand ophthalmoscope and the pin located in relationship to the hole. A pin is then inserted through the sclera to enter the subretinal space posterior to the hole. Other pins are placed just above and immediately below the tear. All these pins are identified by ophthalmoscopic examination during surgery (Figure 1). After the hole has been outlined on the sclera with the pins, a .5 mm. Kronfeld tip is used to make a light barrage from the superior ora serrata around posterior to the hole and back to the inferior ora serrata below the hole. For this procedure, "cutting current" is used to produce a pin-point hole in the sclera. A double row of these non-perforating points are placed in the sclera to form a *U*-shaped barrage around the hole. The pins are then removed, and the subretinal fluid usually drains through the holes made by the pins. The fundus is then examined for evidence of detachment. If the retina is still elevated below (as it may be), one makes an

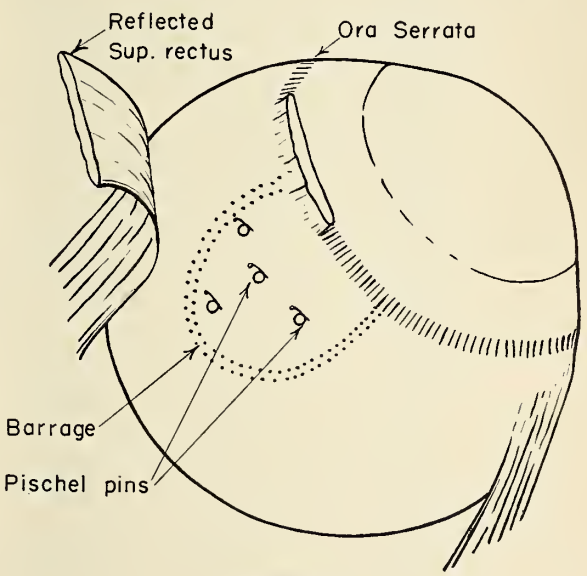


Figure 1.

Drs. Braley and Ostler are, respectively, head and a staff member of the Department of Ophthalmology at the College of Medicine at the State University of Iowa.

* Manufactured by the Thermosector Company.

TABLE I

DETACHMENT IN OTHERWISE NORMAL EYES

No.	Patient	Age	Duration	No. of Op.	Vision-P. O.	Result
1.	E.A.	68	1 month	2	6/15	Good
2.	G.A.	44	3 months	5	Blind	Unsuccessful
3.	J.B.	67	3 months	2	6/12	Good
4.	C.B.	68	1 week	1	6/12	Good
5.	E.B.	71	1 month	1	6/15	Good
6.	R.C.	54	2 months	1	6/9	Good
7.	W.C.	40	2 weeks	1	6/9	Good
8.	R.C.	50	3 weeks	1	6/9	Good
9.	D.C.	19	3 months	2	6/30	Hole in macula
10.	L.C.	78	6 months	3	6/60	Good
11.	C.C.	79	2 days	1	6/12	Good
12.	J.H.	51	2 years	2	Blind	Unsuccessful
13.	W.E.	26	2 years	1	6/21	Good
14.	W.E.	58	4 months	2	6/15	Good
15.	L.F.	40	3 months	4	6/12	Good
16.	J.F.	67	4 months	2	6/15	Good
17.	B.F.	56	2 months	1	Blind	Unsuccessful
18.	H.F.	40	3 months	2	6/6	Good
19.	J.G.	58	7 months	1	6/4.5	Good
20.	J.G.	49	7 months	1	6/6	Good
21.	M.H.	61	1 month	2	6/15	Good
22.	R.H.	52	3 weeks	1	6/15	Good
23.	A.H.	58	2 weeks	1	H.M.	Unsuccessful
24.	M.H.	67	1 month	2	Blind	Unsuccessful
25.	J.H.	24	2 weeks	2	6/9	Good
26.	G.H.	57	2 months	1	6/21	Good
27.	J.H.	59	2-½ months	2	Blind	Unsuccessful
28.	H.H.	60	1 year	5	Blind	Unsuccessful
29.	H.K.	70	1 month	1	6/21	Good
30.	W.K.	64	4 days	1	6/15	Good
31.	M.J.	69	7 weeks	1	6/30	Good
32.	R.M.	39	2-½ months	1	6/9	Good
33.	F.M.	19	3 months	1	6/21	Good
34.	P.M.	10	3 weeks	1	Blind	Unsuccessful
35.	L.M.	19	1 month	1	6/12	Good
36.	I.M.	54	2 weeks	1	6/15	Good
37.	C.M.	63	5 months	1	6/15	Good
38.	F.M.	62	3 weeks	1	6/15	Good
39.	C.N.	69	N.R.	1	Blind	Unsuccessful
40.	L.N.	50	5 months	2	Blind	Unsuccessful
41.	I.N.	64	7 months	3	Blind	Unsuccessful
42.	R.N.	13	2 months	2	Blind	Unsuccessful
43.	A.N.	13	2 weeks	3	Blind	Unsuccessful
44.	B.N.	17	1 month	1	6/30	Good
45.	H.P.	61	N.R.	1	6/9	Good
46.	H.P.	66	1 month	1	6/60	Good
47.	H.P.	52	3 months	1	6/6	Good
48.	J.P.	40	N.R.	1	6/15	Good
49.	H.T.	40	14 months	3	6/6	Good
50.	G.T.	42	5-½ months	2	Blind	Unsuccessful
51.	C.W.	70	3 months	1	Blind	Unsuccessful
52.	W.W.	54	3 months	2	6/15	Good
53.	L.C.	37	14 months	3	6/60	Good
54.	R.L.	37	2 months	1	6/60	Good
55.	M.R.	59	4 months	4	Blind	Unsuccessful
56.	F.S.	44	1-½ months	3	Blind	Unsuccessful
57.	N.S.	68	8 months	2	6/9	Good
58.	M.S.	50	2 weeks	1	6/6	Good
59.	E.S.	46	3 weeks	1	6/6	Good
60.	H.S.	60	5 days	1	6/6	Good
61.	C.S.	60	5 days	2	6/15	Good
62.	F.S.	60	3 weeks	1	6/9	Good
63.	M.M.	10	3 weeks	3	Blind	Unsuccessful
64.	L.M.	25	8 months	1	6/60	Good
65.	L.C.	23	3 weeks	1	6/30	Good
66.	W.E.	26	2 years	1	6/21	Good
67.	F.O.	63	2 months	1	6/12	Good
68.	E.R.	61	7 months	3	Blind	Unsuccessful
69.	I.R.	53	2-½ months	2	6/21	Good
70.	G.G.	55	3 weeks	1	6/9	Good
71.	A.R.	60	2-½ months	3	Blind	Unsuccessful
72.	G.M.	50	2 weeks	1	6/15	Good
73.	E.F.	61	1 week	1	6/9	Good
74.	A.L.	61	6 months	4	Blind	Unsuccessful
75.	C.B.	64	10 days	1	6/4.5	Good
			APHAKIC GROUP			
76.	G.A.	53	3 months	1	6/6	Good
77.	F.A.	36	1 month	1	6/6	Good
78.	H.B.	62	2 weeks	1	6/6	Good
79.	L.C.	60	2 months	1	Blind	Unsuccessful
80.	A.C.	72	2 months	1	Blind	Unsuccessful
81.	W.C.	54	2 months	3	Blind	Unsuccessful
82.	L.F.	75	3 months	3	6/15	Good
83.	L.F.	55	1 month	1	6/12	Good
84.	R.J.	66	2 months	2	H.M.	Unsuccessful
85.	B.K.	71	1 month	1	H.M.	Unsuccessful
86.	H.M.	57	2 months	3	Blind	Unsuccessful
87.	F.P.	60	5 months	1	6/60	Unsuccessful
88.	J.P.	53	17 months	5	Blind	Unsuccessful
89.	E.P.	74	7 months	2	6/60	Good

No.	Patient	Age	Duration	No. of Op.	Vision-P. O.	Result
90.	J.S.	29	2 months	2	Blind	Unsuccessful
91.	R.S.	61	4 months	3	Blind	Unsuccessful
92.	C.M.	57	1 month	1	6/6	Good
93.	C.H.	68	2 months	1	H.M.	Unsuccessful
94.	J.F.	72	1 week	1	6/60	Good
95.	H.B.	65	2 weeks	1	6/15	Good
96.	B.B.	50	3 months	2	6/9	Good
97.	H.B.	72	2 weeks	1	6/9	Good
98.	E.M.	72	1 year	6	6/9	Good
99.	J.B.	69	3 months	2	6/60	Good
100.	A.P.	52	not recorded	2	6/15	Good

opening through the sclera and removes the subretinal fluid, using an eye dropper as suction over the hole in the sclera. The muscles are then re-attached to the tendon stumps, and the conjunctiva is closed with interrupted catgut sutures. One per cent Atrozine is instilled, and a binocular dressing is applied. The patient is kept flat in bed for seven days, and the dressings are changed every other day. He is allowed up on the seventh postoperative day, and is discharged from the hospital on the tenth.

RESULTS

The results are tabulated on the basis of improvement in vision and reattachment of the retina. When the retina was reattached and the vision improved, the case was considered a success. When the retina remained detached, even though there was an improvement in vision, it was tabulated as a failure. In the entire series of 100 cases, there were 68 successful operations and 32 failures. These overall results would indicate that surgery in most cases of detachment, no matter how long the condition has remained unremedied, is approximately 70 per cent successful (Table 1).

In our series, were 75 cases of otherwise normal eyes in which the lens was intact or had not been removed prior to retinal surgery (Table 2).

TABLE 2

		Results	
Age	Duration of Detachment	Aphakic (25 cases)	Phakic (75 cases)
Range 10-79 yrs.	Range 2 days-60 mos.	Success 14 cases (56%)	Success 54 cases (72%)
Average 54 yrs.	Average 4.2 mos.	Failure 11 cases	Failure 11 cases

There were 54 successful operations and 21 failures (72 per cent success). There were 25 cases in the aphakic group, in which a cataract extraction had been done sometime previous to the retinal detachment. There were 14 successful operations and 11 failures in those cases (56 per cent success). These results indicate that a detachment in the aphakic has a better than 50-50 chance of a successful operation.

AGE

The age of the patient may play some role in the success or failure of surgery. (Table 3).

TABLE 3

Age Group	Incidence	Success	Percentage
10-20	8	4	50
20-30	6	5	83
30-40	4	3	75
40-50	10	7	70
50-60	27	17	71
60-70	33	24	72
70-80	12	8	67

There were 8 patients under the age of 20 and 12 patients over the age of 70.

We were not particularly successful with the younger patients, there being only 4 successful operations, for a percentage of 50. In the older group, the patients over 70 years of age, we were successful in 8 out of 12 cases (75 per cent). In nearly all of the youngest patients with detachment, there was bilateral retinal disease which continued to detach in spite of surgery. Operations were successful only in those cases which appeared to have followed trauma.

The largest group, 33 patients, were between 60 and 70 years of age. There were 24 successful procedures and 9 failures in that group. Nearly all had multiple holes and moderate to severe vascular changes.

It is thus apparent that age alone does not provide a basis for predicting whether or not the operation will be successful. Sixty-eight per cent of successes were obtained even though 45 of the patients were over 60 years of age. Indeed, though the average age was 54, if one lists the 100 individuals in the order of their ages, he finds that numbers 50 and 51 in his list were approximately 60 years of age. The youngest patient operated upon was 10 years old, and the eldest was 79—the latter, incidentally, with good result. The visual results are recorded in Table 4.

In the 14 successes in the aphakic group, visual results were good in most instances. Eleven had vision of 6/15 or better, and of those, 4 had 6/6, 3 had 6/9, 1 had 6/12 and 3 had 6/15. The remaining 3 had 6/60 or better on last examination. Many of the patients with 6/60 vision were happier than those with 6/9, especially when 6/60

was obtained in an only eye. The total of 68 successful operations in the combined group showed that 57, or 84 per cent, had 6/15 or better, 28 patients having 6/9 or better. Several patients in this group were able to read 6/4-1/2. The

TABLE 4
SUCCESSFUL CASES

Vision After Surgery	*Number of Patients*	*Percentage*	*Aphakic*	*Phakic*
6/60	8	11	3	8
6/30	3			
6/21	7	57	11	46
6/15	12			
6/12	10			
6/9	14			
6/6 or better	14			
Total	68	100	14	54

time during which the retina has been detached does not necessarily influence the visual result or the success of surgery. On the average, 4.2 months had elapsed between the time when detachment was first noticed by the patient and the time when treatment was started (Table 2). The shortest in this series was 2 days, and the longest was 5 years. In both of these cases, the retinas were successfully reattached. The former resulted in 6/6 vision, and the latter in 6/15 vision. The other patients whose retinas had been off for one year or longer obtained 6/60 vision. Through the biomicroscope, the macula looked as if it were still detached, however.

The number of operative procedures on a patient is not always indirectly proportional to the final result. In the aphakic group, for example, E.M. had 6 operations and still had 6/9 vision when he finally reattached. The retina has remained on for 6 months at the present writing. Only one operation was required in 8 of the successful aphakic patients. In the unsuccessful group, 6 of the 11 patients had more than one operation.

In the unsuccessful operated cases who were phakic, 16 patients were operated upon two or more times, and only 5 were operated upon just once. On the average, nearly three operations per patient were performed on this group. In the successful group, one operation was sufficient in 39 cases. The remaining 15 cases were operated upon two or more times. One patient, L.F., underwent surgery four times and now has 6/12 vision, with a full field.

COMMENT

These 100 cases are reported as they appeared for surgery, no attempt having been made to divide the favorable from the unfavorable groups. When a diagnosis of traumatic or idiopathic detachment of the retina was made, surgery was advised without regard for the duration of the detachment or the age of the patient. There were 75 patients whose lens was intact with detachments. Of the 54 whose retinas reattached, 46, or 87 per cent, had 6/15 or better vision. In the aphakic group of 25 patients, 14 were successfully operated upon, and 11, or almost 80 per cent, subsequently had 6/15 or better vision.

From these findings, we conclude that nearly every detachment of the retina should be treated by surgery. We wish to emphasize accurate diagnosis in order to rule out intraocular neoplasms, proliferating retinitis of diabetes, Coats' disease, Harado's disease and toxemia of pregnancy. Patients whose difficulty has been diagnosed definitely as one of these other entities should not be operated upon, but if there is any doubt about the diagnosis, the patient should be treated as an idiopathic detachment of the retina.

SUMMARY

1. One hundred consecutive cases of detachment of the retina are presented, 75 having occurred in otherwise normal eyes and 25 in aphakic eyes.

2. Seventy-two per cent of the phakic eyes were successfully treated surgically, and 56 per cent of the retinas of aphakic eyes were reattached.

3. The average age of patients was 54, but 72 of the 100 were over the age of 50.

4. Eighty-four per cent of the reattached eyes obtained 6/15 or better vision.

5. The duration of the retinal detachments averaged 4.2 months, the longest being 5 years.

6. A brief description of the operative technic is given.

ROUTINE EXAMINATION OF COLON ADVISED

Routine examination of the colon and rectum as a part of every complete physical examination of an adult patient has been recommended by Dr. Neil W. Swinton, of the Lahey Clinic, in the June, 1955, issue of SURGICAL CLINICS OF NORTH AMERICA. By such means, he says, tumors can be discovered before symptoms develop and malignant degeneration occurs.

Polyps, Dr. Swinton reports, are found in approximately 5 per cent of patients, regardless of symptomatology, who are examined by sigmoidoscope at Lahey Clinic. And, he comments, "It is generally accepted that benign mucosal polyps of the colon and rectum are definitely premalignant lesions, and their destruction or removal will be effective in the prevention of the development of cancer in these organs. . . . Such cancer ranks third among malignant diseases in both males and females."

Technical improvements in enema preparations, which are now available in disposable polyethylene containers, have facilitated the preparation of patients for sigmoidoscopy, writes Dr. Swinton. The preparation of patients who give themselves an enema at home is described as unsatisfactory.

Mercy Hospital, Des Moines

Clinicopathologic Conference

May 3, 1955

SUMMARY OF CLINICAL FINDINGS

Mrs. H. F., a 62-year-old white woman, was admitted to Mercy Hospital, Des Moines, on April 4, 1955, and died on April 6, 1955. She had first been admitted to this hospital in June, 1946, with a chief complaint of vaginal spotting, backache and chronic fatigue. Her blood pressure was 170/100. The hemoglobin was 12 Gm. on that admission, and the red blood count was 3,540,000. There were 16,350 white blood cells with a neutrophilia. Three urinalyses performed during her 17-day hospital stay showed two plus albumin. A dilatation and curettage and a cervical biopsy were done, and a diagnosis of squamous cell carcinoma of the cervix, keratinizing type, was made. She had a hysterosalpingo-oophorectomy and was discharged on June 26, 1946.

On June 14, 1950, the patient was readmitted to Mercy Hospital with chronic tonsillitis, and the tonsils were surgically removed.

The third admission was on December 19, 1954. Her chief complaints were anemia and "run down" condition. She had been having shortness of breath for several months and some swelling of her hands due to arthritis, but her main complaint was a constant feeling of tiredness. Her blood pressure was 118/70. Fine, crepitant rales were heard in the right lung base posteriorly, and there were decreased breath sounds bilaterally on auscultation of the chest. A soft systolic murmur was heard at the apex of the heart. Numerous laboratory tests were done. Examination of the sputum for acid-fast bacilli was negative. Culture of the bone marrow for histoplasmosis was negative. A stool examination revealed no ova or parasites. The hemogram showed 12.1 Gm. of hemoglobin, or 79 per cent; red blood cells 4,010,000; and white blood cells 20,300, with a differential of 65.5 per cent segmenters, 13.5 per cent eosinophils, 15 per cent lymphocytes, 1 per cent basophils, and 5 per cent monocytes. An examination of the urine for 17-ketosteroids was 2.4 mg./diem. The basal metabolism rate was plus 11. The VDRL and Kline flocculation tests were negative. A urinalysis showed acid reaction, yellow color, specific gravity 1.003, and no albumin. A bone marrow examination revealed hyperplasia, with increase in eosinophilic elements. The myeloid erythroid ratio was 6.5 to 1.0. The hematology report stated that the findings were suggestive of leukomoid reaction secondary to one of the following: (1) chronic inflammation; (2) neoplasm with bone involvement; (3) lymphoma, particularly Hodgkin's disease; (4) intestinal parasitism; (5) trichinosis; or (6) collagen disease, particularly polyarteritis nodosa. The electrocardiogram was within normal limits.

A radiologist's report submitted on December 20, 1954, stated, "The patient's chest reveals the transverse diameter of the heart at the upper limits of normal for size. There are heavy linear markings in both bases, with minor haziness that suggests the possibility of pleural effusion. Conclusion: pulmonary congestion probably due to cardiac decompensation. There is also some osteoarthritis of the spine."

The patient's temperature while in the hospital was normal until midafternoon on December 28, when it suddenly rose to 103°F. But in 24 hours the temperature returned to normal, and the patient was discharged on December 30, 1954, with a final diagnosis of (1) chronic bronchitis and pulmonary fibrosis, cause undetermined; (2) rheumatoid arthritis; (3) eosinophilia secondary to those other two entities.

Her fourth admission was on March 23, 1955. During the interim, she had been hospitalized at University Hospitals, Iowa City, from January 24, 1955, to March 2, 1955. No definite diagnosis had been established there. Recently, she had had nausea and vomiting, which was attributed to streptomycin administration. She had lost 16 pounds in the previous three months. Weakness was still present. She still had arthritis and muscle pain, particularly in the extremities. She now had nocturia (twice nightly). The physical examination was essentially negative.

A hemogram revealed 10.1 Gm. of hemoglobin; 3,470,000 red blood cells; and 16,850 white blood cells, with a differential of 86 per cent segmenters, 12 per cent lymphocytes, and 2 per cent monocytes. The urinalysis on March 24, 1955, showed an acid reaction, straw color, specific gravity 1.021, albumin 2 plus, red blood cells 3 to 6, white blood cells 3 to 6, epithelial cells 8 to 12, and occasional granular casts.

The patient's temperature was normal during her first three days in the hospital, but on March 26 it rose to 100.1° and later in the day to 101°F. On the day of discharge, March 27, her temperature had returned to normal. The patient was treated symptomatically for nausea and vomiting, and was much improved at the time of discharge. The final diagnosis was nausea and

vomiting, cause undetermined but probably drug induced.

The final admission was on April 4, 1955. The patient's chief complaints then were nausea and vomiting, which had been present since her discharge one week previously. On the night before she reentered the hospital, she had developed chest pain, fatigue, shortness of breath and insomnia. On physical examination, her blood pressure was 150/90; pulse 120; and respirations 32 per minute. Her temperature was 97°F. Harsh rales were heard at the lung bases. The heart rate and rhythm were normal, and there were no murmurs.

A hemogram on April 5 showed 10.1 Gm. of hemoglobin; 4,260,000 red blood cells; and 46,800 white blood cells, with a differential of 78.5 per cent segmenters, 14 per cent bands, 4 per cent lymphocytes, and 4.5 per cent monocytes. The red blood cells showed moderate anisocytosis, mild poikilocytosis, polychromia and hypochromia.

An electrocardiogram on April 5 "revealed left axis deviation; abnormal T-wave possibly due to myocardial or chemical changes. Compared with the tracing of 12-24-54 there is a marked change in the T-wave. . . ." One taken on April 6, when compared with the tracing of the previous day, showed changes suggestive of myocardial infarction. Numerous extra systoles and dropped beats were noted.

X-ray of the chest on April 4 was interpreted as follows. "The film reveals a parenchymatous infiltration involving both lung fields on the right and left. There appears to be some pleural effusion on the right also. There is a tendency toward nodulation. The transverse diameter of the heart is at the upper limits of normal for size. The thoracic upper lumbar spine reveals no destructive changes. There is some osteoarthritis present."

On the morning of April 6, 1955, the patient became suddenly confused. She had marked respiratory difficulty, even though in an oxygen tent, and in a few minutes was unconscious. Nasal oxygen was given by catheter, and she shortly regained consciousness. Auricular fibrillation was then observed, with a heart rate of 175. Lanatoside C, 1.2 mg., was given intravenously, very slowly. Five minutes later, the heart rate was 100 and the pulse 80, and the patient was still fibrillating. Forty minutes later she had a regular heart rate and rhythm of 80, and no pulse deficit. In the evening of April 6, she complained of weakness, and her pulse was very weak. The blood pressure was 50/30. Respirations were very shallow. At 10:30 p.m. the respirations were labored and gasping, and she ceased breathing at 10:35 p.m. On admission to the hospital, the patient's temperature had been 97°F., on the second hospital day it had risen to 100.4, and on the day of death it was 100.4° rectally.

DISCUSSION

Dr. F. C. Coleman: The clinical discussion will be given by Dr. Donald Schissel, and in introducing him I should like to say that the case he is to present is his own. This is the first time I have ever seen a physician present his own case in a clinicopathologic conference without knowing the autopsy findings, but here is what happened. Dr. Schissel had seen this patient over a period of several years, but the postmortem examination was performed at a time when he could not be present. Because the case was a very interesting one, we asked him to restrain his curiosity about the autopsy findings until the meeting tonight so that he could discuss his own case. The autopsy diagnoses, so far as I have been able to determine, are known only to the members of the Pathology Department.

Dr. Schissel: This 61-year-old woman, when first examined in April, 1953, appeared normal. Beginning late in 1952, she had experienced exhaustion, fatigue, mild shortness of breath, and vague arthralgias and myalgias. Blood studies revealed a moderate anemia and an elevated sedimentation rate. The X-ray of her chest showed an infiltration in the right base which was thought to be an unresolved pneumonia. Because she did not desire any definitive diagnostic work-up, she was treated symptomatically. By July, 1953, she had improved enough to consider herself normal. Her anemia had disappeared, and her sedimentation rate had returned toward standard, but X-ray of her chest showed little change during the three month period from April to July.

She was not seen again until November, 1954, when she entered the office complaining of essentially the same symptoms. As before, her chief complaints were of fatigue and exhaustion. There was shortness of breath following exertion. She had a mild, hacking cough, but it was only after considerable questioning that she admitted having it, and she attributed it to cigarettes. She had also noticed dependent swelling of the ankles, but she complained more bitterly of pain in her joints and muscles. Again she was anemic, and her sedimentation rate was elevated.

Physical examination showed some periarticular swelling of the small joints of the hands. She had coarse rales in the lower third of both lungs. X-ray of her chest showed no appreciable change in comparison with the film taken in April, 1953. There was a little increase in the fibrosis in both bases. As before, she was treated symptomatically.

About this time, she noticed she was running an intermittent fever. At times it reached 100 and 101°F., and occasionally 102 and 103°. She was having some pain in the upper abdomen and lower chest which frequently was associated with anorexia, occasionally with nausea, and rarely

with vomiting. She failed to respond to treatment at home, and because her symptoms progressed, she was admitted to Mercy Hospital in December, 1954.

Shortly before that one of her hospital admissions, she had an episode of left temporal mandibular arthritis which responded to salicylates and rest.

After she entered the hospital, various examinations were made, as has been noted in the protocol. The results were all negative, with the exception of those showing eosinophilia and leukocytosis. She had an intermittent fever. There was no change in her symptoms. She returned home, but failed to improve, and in January, 1955, was admitted to University Hospitals, in Iowa City.

While she was there, many of the tests done at Mercy Hospital were repeated. Again they were negative. In addition, bronchoscopy was negative. A bronchogram was negative except for a minimal amount of bronchiectasis in the left base. Numerous sputum studies, tracheobronchial washings, laryngeal washings and gastric content studies were negative. Serum electrolytes and serum proteins were normal. Histoplasmosis and coccidioidomycosis skin tests were negative. Agglutinations for brucella and typhoid were negative. The PPD No. 2 was positive. Blood cultures were negative. She was moderately anemic and had a persistent leukocytosis and eosinophilia.

When she was in the hospital at Iowa City, her symptoms of fatigue, exhaustion, hacking cough, shortness of breath, arthralgias, myalgias and intermittent fever remained the same.

She was given a course of antibiotic therapy without any alteration in her condition. Acid-fast bacilli were found on smears of two gastric content studies. For this reason, she was given a course of antituberculosis therapy consisting of streptomycin, PAS and isoniazid. This therapy was continued until her cultures and guinea pigs were reported negative. It did not alter her course. She returned home without a diagnosis.

Ten days after her return from Iowa City, she had an episode of nausea and vomiting which did not subside with the usual treatment at home. She was readmitted to Mercy Hospital. The nausea and vomiting subsided rapidly with parenteral fluids and restriction of oral intake.

Following her discharge from the hospital, her course continued about the same. The symptoms of fever, sevère muscle and joint pain, exhaustion, fatigue, shortness of breath, upper abdominal and back pain, anorexia and nausea continued. Two days before her final admission, she began to have episodes of severe shortness of breath associated with apprehension. I never saw her in one of those attacks, but they usually subsided spontaneously in 30 to 90 minutes. Because of these, she was admitted for the last time. On the day of death, she had a rapid auricular fibrillation which responded to Lanatoside C. Several hours after that, she appeared the same as she had on previous occasions. X-ray of her chest on final admission showed definite changes in that now there were infiltrations throughout both lung fields and a pleural effusion on the right. That evening she became weak, the blood pressure fell, and she went into coma and died rather suddenly.

In summary, we have a woman in her seventh decade with a chronic progressive disease which involved many systems and resulted in her death. Her symptoms consisted of exhaustion, fatigue, dyspnea, hacking cough, arthralgias and myalgias, intermittent fever, upper abdominal, chest and back pains, nausea and vomiting, and weight loss. Urine examinations on occasion showed albumin, red cells, white cells and casts. On occasion, she had a definite hypertension, with blood pressure recordings of 180/110. She had leukocytosis, eosinophilia, anemia and elevated sedimentation rate. Terminally, she had auricular fibrillation and non-specific electrocardiographic changes. She died in shock. This suggests to me one of the diseases in the collagen group. Of them, the one of which the findings seem to be almost a textbook description is polyarteritis nodosa.

Another disease which caused considerable concern, especially when she first became ill, was tuberculosis. She had a history of cervical adenitis when she was eight years old, with surgical excision of the glands. She said she did not think they had been tuberculous, but an aunt who died at that time had tuberculosis. Pulmonary tuberculosis with dissemination and miliary spread could certainly account for many, if not all, of the symptoms she had. Tuberculous involvement of the adrneal cortex could explain her death in shock. However, she had had many sputum studies, tracheo-bronchial washings, laryngeal washings, gastric content studies, all negative for acid-fast bacilli. I think that tuberculosis thus can be excluded.

Another group of entities that caused concern at first were the fungus diseases. Histoplasmosis can mimic tuberculosis completely, and anything said about tuberculosis could be said of histoplasmosis. It, too, can involve the adrenals, with destruction of the adrenal cortex and death due to adrenal failure. The other fungus disease considered was coccidioidomycosis. The summer before she became ill, she had spent her vacation in desert fever country in California. Skin tests for histoplasmosis and coccidioidomycosis were negative, and since the skin test is quite specific, I think it is quite unlikely that she had either of those two diseases.

In the early part of her course, cancer was another possibility that received consideration. She had a history of carcinoma of the cervix. She was examined by a gynecologist, but he could

find no local recurrence. Primary carcinoma of the lung was also considered. We all have seen patients in whom metastatic lesions in the lung have obscured the primary bronchial carcinoma. An inconspicuous carcinoma elsewhere in the body, principally in the kidney or pancreas, with spread to the lungs, was also thought of. However, I think that the possibility of this lady's having had cancer is remote.

In conclusion, I think this patient had polyarteritis nodosa, and that the mechanism of her death was cardiac failure. One must also consider destruction of the adrenal cortex secondary to polyarteritis as the immediate cause of death.

Dr. Coleman: Dr. Hines, will you please present the X-rays in this case?

Dr. Ralph E. Hines: In two early radiographs of this patient's chest that were taken in our office, an area of density could be seen in the right base. In the second one, moreover, there was some haziness in the left base. There was a suggestion, but no more than that, of cardiac enlargement, with both upper lung fields and the hilar areas being relatively normal.

In the lateral films of the chest taken at the same time, the posterior portions of both lung fields were clear. The heart shadow was normal. The vertebrae were essentially normal, and the aorta was not remarkable.

During the patient's first hospitalization, we did studies of the pelvis, thoracic and lumbar spine, and we saw nothing abnormal at that time.

In a chest film taken on December 20, 1954, there is a suggestion of increased haziness. The heart shadow is not particularly enlarged. One could interpret those findings as probably being due to cardiac failure, although the heart shadow is not too large.

In the April 5 radiographs of the chest, considerable change was revealed. A hazy, ill-defined, fibrotic type of pneumonitis with no discrete nodularity was present.

The lesion did not have the appearance of a far-advanced tuberculosis or of a fungus disease such as far-advanced histoplasmosis or coccidioidomycosis which would mimic tuberculosis. The high eosinophilic count might suggest Boeck's sarcoid or Loeffler's syndrome, but those two diseases are more likely to be confined to one lung or to a segment of lung, rather than to be a diffused disease process. This lesion did not have the discrete nodularity of a metastatic carcinoma, and it did not look like a pulmonary adenomatosis or alveolar carcinoma. The patient had a good history for alveolar carcinoma, but I do not feel that the radiographic appearance justified such a diagnosis. Rather, I think these X-rays demonstrated the changes that are likely to occur in collagen disease, such as polyarteritis nodosa.

Dr. Coleman: Thank you, Dr. Hines. Dr. Schissel has one more statement that he would like to make. It is in regard to studies for L-E cells.

Dr. Schissel: The L-E cell studies were done both here and at Iowa City, and they were negative. A skin and muscle biopsy was recommended, but the patient refused it.

Dr. Coleman: Dr. Schissel's diagnosis is polyarteritis nodosa. Do we have other diagnoses suggested from the audience?

Dr. E. R. Posner, Jr.: Were bone marrow specimens cultured?

Dr. Coleman: Bone marrow examinations were done twice and were not diagnostic. Yes, the bone marrow was cultured for pyogenic organisms and fungi, and the cultures were negative.

Dr. John Hess, Jr.: Were any liver function tests done?

Dr. Schissel: No liver function tests were done, except for the serum protein determination, and that was normal.

Dr. Robert A. Weston: I should like to suggest carcinoma of the liver.

AUTOPSY FINDINGS

Dr. Coleman: This patient came to autopsy on April 6, 1955. External examination of the body



Figure 1. Cut surface of kidney and liver. Note the thin cortex of the kidney. The calices and pelvis are normal. "Nutmegging" due to passive congestion of the liver is present.



Figure 2. Photomicrograph—epicardial surface. Note the collections of fibrin and the inflammatory cells in the epicardial fat.

was essentially negative, as was examination of the peritoneal cavity. All organs were in their normal positions. The pelvic organs, of course, were absent, having been removed in 1946 as part of the surgical treatment for carcinoma of the cervix. There was 750 cc. of serous fluid present in each pleural cavity. Incision of the pericardial sac revealed a fibrinous pericarditis.

Cross section of the left ventricle revealed slight hypertrophy of the left ventricle. Mild to moderate coronary arteriosclerosis was observed, but it was not thought to be out of keeping with the age of the patient.

Both lungs were of increased weight, the right weighing 460 Gm. and the left 360 Gm. A fibrous pleuritis was observed bilaterally. The lower lobes of the lungs were of firm consistency. The liver weighed 1,280 Gm. Its external surface was pale, and nutmegging of the type observed in chronic passive congestion was noted on the cut surface. Gross examination of the pancreas, spleen, gallbladder and bile ducts, and adrenal glands was essentially negative. Each kidney weighed 150 Gm. and had a normal contour, but diffuse scarring of the cortical surface of each kidney was present. Examination of the urinary bladder, the gastrointestinal tract and the skeletal system was essentially negative.

At the conclusion of the autopsy, I am frank to state, we were not certain of the diagnosis. The gross anatomic changes were not in keeping with the patient's symptoms.

Microscopic examination of specimens from the various body tissues, however, enabled us to reach a decision. Sections of the epicardium revealed collections of lymphocytes and plasma cells in the epicardial fat, and fibrin was noted in the epicardial surface. Sections of the myocardium from the left ventricle revealed focal myocarditis, with collections of lymphocytes, plasma cells and a few polymorphonuclear leukocytes. The myocardial muscle fibers also showed some change in staining characteristics, with some of the fibers taking a very pale eosinophilic stain. Sections of lung revealed two types of lesions. In one type there was a rupture of the alveolar sacs so as to form large spaces. Lying in these large spaces were masses of fibrin, around which were small numbers of red blood cells and occasional polymorphonuclear leukocytes. The interstitial tissues between these large spaces were thickened as a result of fibrosis. The other lesion observed was that of organizing pneumonia. Alveolar spaces were filled with fibrous tissues. In those areas there were only a few air spaces. Sections of the pancreas revealed focal pancreatitis, with numerous polymorphonuclear leukocytes, lymphocytes and plasma cells. Sections of liver revealed chronic passive congestion.

The sections of the kidney gave us the clue that we needed. They revealed marked arteriolosclerosis, most evident in the afferent arterioles. Sections stained with Masson's trichrome stain were prepared and examined because of the possibility of the patient's having had a collagen disease. In lupus erythematosis, for example, sections of kidney stained with Masson's trichrome reveal no staining of the basement membrane of the glomerular tufts. In a patient who has no collagen disease, the basement membrane takes a light green stain. In the patient under discussion, the staining characteristics of the basement membrane were normal. Other sections were stained with Mallory's phosphomolybdic acid stain, a differential stain for collagen. In kidney sections from our patient, the collagen in the fibrotic glomeruli took a normal purplish-blue stain. In some sections stained with hematoxylin and eosin, arteriosclerosis of the efferent arterioles was observed. In one such arteriole there was occlusion of the arteriole, with the development of what amounted to wet gangrene of the glomerular tuft. Other sections of the kidney revealed marked interstitial pyelonephritis.

A review of sections of the cervix prepared in 1946 indicates that the patient had had a squamous

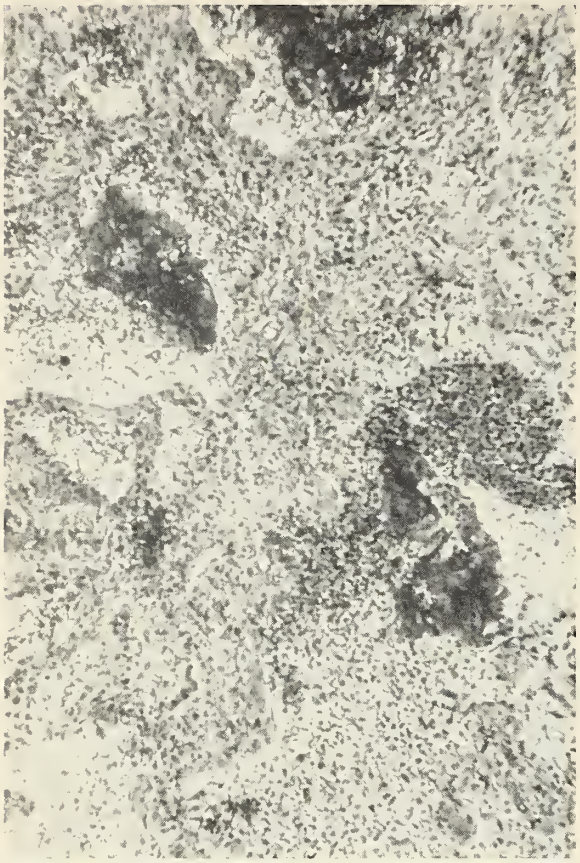


Figure 3. Photomicrograph—lung. Alveolar sacs are ruptured, and the spaces thus formed contain masses of fibrin surrounded by red blood cells and polymorphonuclear leukocytes.

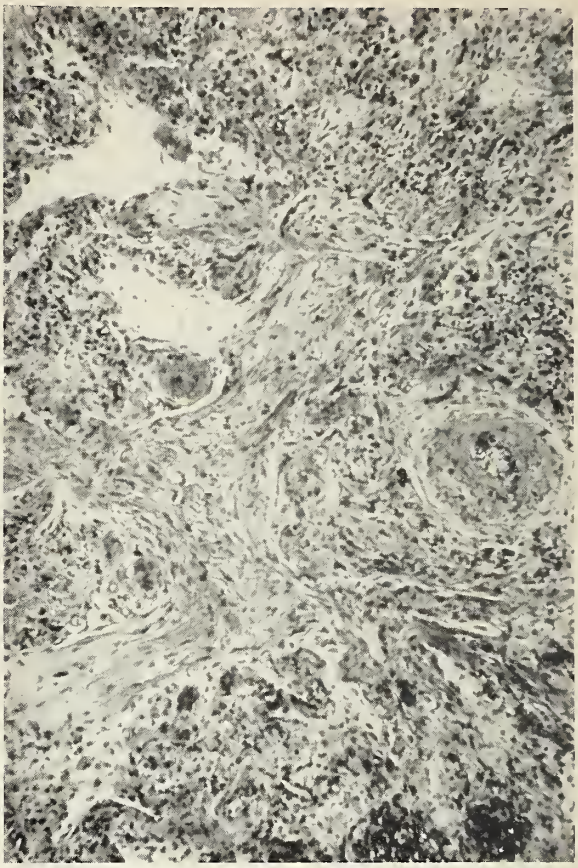


Figure 4. Photomicrograph—lung. There is an organizing pneumonia present which is adjacent to an area of so-called "uremic pneumonitis."

cell carcinoma of the cervix. But at the time of autopsy, no residual carcinoma could be demonstrated.

Some chemical studies were also performed, including a blood urea nitrogen. The blood urea nitrogen was elevated, being approximately 85 mg. per cent.

Reviewing all of the autopsy findings, we came to the conclusion that the patient had advanced nephrosclerosis with chronic uremia, and as we analyze her story we realize that all of her signs and symptoms can be explained on the basis of chronic uremia. Since chronic uremia due to nephrosclerosis usually occurs in patients with hypertension, I went to the record room to review this patient's old charts. Here are some of the blood pressure readings that I found in them. In 1946 she had a blood pressure of 170/100; in December, 1954, normal; in March, 1955, 202/90; and in April, 1955, 150/90.

One of the very confusing things about this patient's story was the leukocytosis which she presented in the last few months of her life. I must confess that I have never seen leukocytosis of this degree in chronic uremia, but when I go to the literature, I find that it can occur. As a matter of fact, Wintrobe states that uremia is one of the causes of marked neutrophilia.

Also in reviewing the medical literature I find that uremic pneumonitis is now a recognized clinical entity. In one of the most recent journals there is a review of 107 cases of uremia by Hopps, of Oklahoma City, in which uremic pneumonitis is described as having been present in approximately 60 per cent. The histopathology in Hopps' cases is somewhat similar to that observed in the patient whom we have been discussing. The anemia which is characteristic of uremia is of course familiar to you. The gastrointestinal symptoms of nausea and vomiting are common in uremia, as are central nervous system symptoms.

We shall not review the biochemical changes which take place in uremia, but there are marked alterations of the body chemistry consequent to the disease.

So we have a patient with nephrosclerosis and chronic uremia of long duration where the arteriosclerotic process was confined principally to the kidney. Associated with the chronic uremia were changes in practically all of the body systems, but particularly in the respiratory system, with the development of uremic pneumonitis.

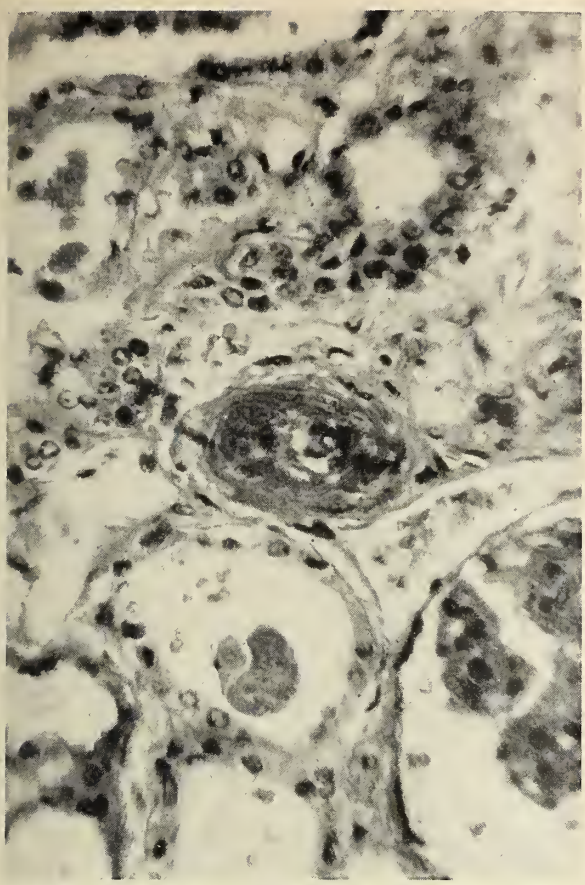


Figure 5. Photomicrograph—kidney. Severe arteriolosclerosis affecting an afferent arteriole can be observed. The tubules contain debris.

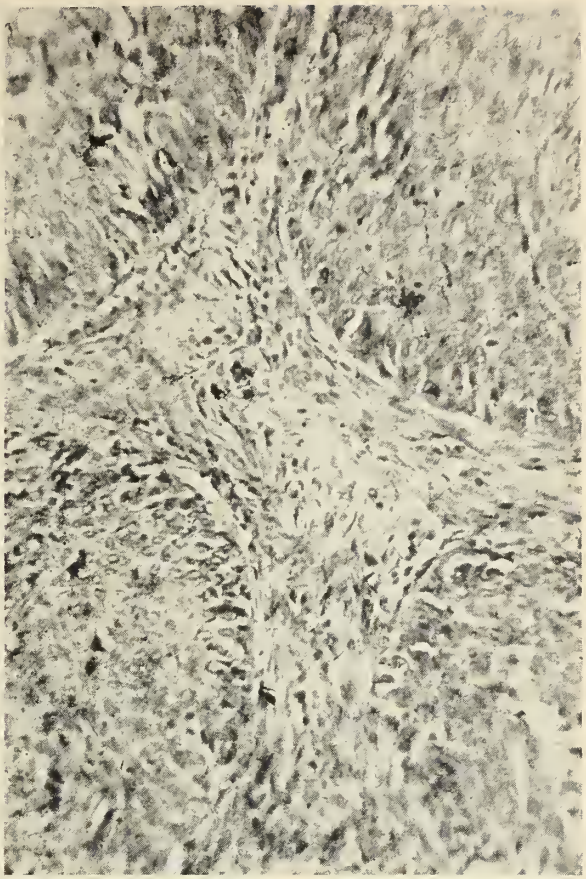


Figure 6. Photomicrograph—cervix. This section was prepared in 1946. Masses of neoplastic squamous cells are noted which are characteristic of squamous cell carcinoma of the cervix.

Final diagnosis: Chronic uremia secondary to nephrosclerosis complicated by uremic pneumonitis and uremic leukocytosis.

Are there any questions or comments about this case?

Dr. John T. Bakody: What about the eosinophilia?

Dr. Coleman: Eosinophilia has been described in uremia, as have been arthritis and muscle pain.

Dr. Cornelius J. McGarvey: Did the muscle biopsy yield any helpful information?

Dr. Coleman: We obtained a number of muscle specimens at the time of autopsy, and all of them were negative. I believe we have enough representative sections to eliminate polyarteritis nodosa.

Dr. Homer E. Wichern: What about the adrenal glands?

Dr. Coleman: The adrenal glands were normal.

Dr. Charles H. Gutenkauf: Is it possible that this could be a "burned out" polyarteritis with no active lesions remaining? It seems strange that the patient should have had lung findings and other symptoms for so long with no polyarteritis at the time of her death.

Dr. Coleman: We considered that possibility and examined a considerable number of sections of skeletal muscle as well as a large number of sections of viscera, but found no evidence of any vessel involvement such as one would observe in healed polyarteritis. As you know, in polyarteritis one may find lesions in all stages of development, but we could not find any lesions, either recent or old, that would be suggestive of that disease.

I should like again to express my appreciation to Dr. Schissel for undertaking this rather unique task tonight.

REFERENCES

1. Hopps, H. C., and Wissler, R. W.: Uremic pneumonitis. Am. J. Path., **31**:261-273, (Mar.-Apr.) 1955.
2. Odel, H. M.: Clinical recognition and management of the uremic state. M. Clin. North America, **31**:860-878, (July) 1947.
3. Harrison, T. R., and Mason, M. F.: Pathogenesis of uremic syndrome. Medicine, **16**:1-44, (Feb.) 1937.
4. Langendorf, R., and Pirani, C. L.: Heart in uremia; electrocardiographic and pathologic study. Am. Heart J., **33**:282-307, (Mar.) 1947.
5. Knutson, J., and Baker, A. B.: Central nervous system in uremia. Arch. Neurol. & Psychiat., **54**:130-140, (Aug.) 1945.
6. Baggenstoss, A. H.: Pancreas in uremia: histopathologic study. Am. J. Path., **24**:1003-1017, (Sept.) 1948.
7. Barnes, R. W., and others: Classification of uremia and differential diagnosis of cases. J.A.M.A., **147**:1106-1109, (Nov. 17) 1951.

Coming Meetings

In State

Sept. 15-16	**Annual Meeting, Iowa Academy of General Practice,** Des Moines
Sept. 16-17	**Trauma & Fractures.** SUI College of Medicine, Iowa City
Sept. 23-24	**Pediatrics.** SUI College of Medicine, Iowa City
Oct. 12	**Thyroid Diseases.** SUI College of Medicine, Iowa City
Oct. 13-14	**Joint Meeting, Mississippi Valley and Iowa Trudeau Societies,** Des Moines
Oct. 28	**Dermatology & Syphilology.** SUI College of Medicine, Iowa City

Out of State

Sept. 5-7	**Southwestern Surgical Congress,** seventh annual meeting. Hotel Muehlebach, Kansas City, Missouri
Sept. 7-9	**Office Psychotherapy in Psychosomatic Problems** (U. of M.). Itaska Park, Minn.
Sept. 7-9	**Minnesota Symposium on Arteriosclerosis.** Mayo Memorial, Minneapolis
Sept. 8-10	**Rehab. Neuromuscular and Rheumatic Diseases.** Creighton Memorial St. Joseph Hospital, Omaha
Sept. 8-10	**Utah State Medical Association,** annual session. Salt Lake City
Sept. 10	**Kansas State Pediatric Society.** Broadview Hotel, Emporia
Sept. 11-14	**Washington State Med. Assn.** Seattle
Sept. 11-21	**Medical Care of Atomic Casualties.** Walter Reed Army Medical Center, Washington, D. C.
Sept. 12-15	**International College of Surgeons,** 20th annual congress. Philadelphia
Sept. 12-16	**Advanced Course in Gastroscopy.** Cook County Grad. Sch. of Med., Chicago
Sept. 12-23	**Surgical Technic.** Cook County Grad. Sch. of Med., Chicago
Sept. 12-30	**Gynecology and Obstetrics.** Cook County Grad. Sch. of Med., Chicago
Sept. 15	**Nebraska AGP,** scientific session. Cornhusker Hotel, Lincoln
Sept. 18-23	**Medical Society of Pennsylvania,** Pittsburgh
Sept. 19-22	**American Fracture Association,** annual meeting. Miami Beach
Sept. 19-23	**Advanced Elcctrocardiography.** Cook County Grad. Sch. Med., Chicago
Sept. 19-23	**Surgery of Colon and Rectum.** Cook County Grad. Sch. of Med., Chicago
Sept. 19-Oct. 1	**Symposium on Otolaryngology.** Univ. of Illinois, Chicago
Sept. 20-23	**Colorado State Medical Society,** annual meeting. Shirley-Savoy Hotel, Denver
Sept. 21	**New Jersey Neuro-Psychiatric Institute,** annual short course. Princeton
Sept. 21-22	**Pediatrics for Pediatricians.** Ctr. for Contin. Study, U. of Minn., Minneapolis
Sept. 21-22	**Ninth Annual Postgraduate Assembly.** San Diego County Hospital, San Diego, California
Sept. 23	**Northwest Pediatrics Society.** Minneapolis
Sept. 26-27	**School Health Conference.** U. of Kansas Medical Center, Kansas City, Kansas
Sept. 26-30	**Postgraduate Course in Venereal Diseases,** sponsored by U.S.P.H.S. University of Chicago
Sept. 26-30	**Pulmonary Diseases.** U. of Colo. Med. Ctr., Denver
Sept. 26-Oct. 1	**Endocrinology and Metabolism.** U. of Indiana, Indianapolis
Sept. 26-Oct. 7	**Basic Principles in General Surgery.** Cook Co. Grad. Sch. Med., Chicago
Sept. 26-Oct. 7	**Surgical Technic.** Cook Co. Grad. Sch. Med., Chicago
Sept. 26-Oct. 7	**Medicine.** Cook County Graduate School of Medicine, Chicago
Sept. 26-Nov. 18	**Eight-week Course in Industrial Medicine.** Postgraduate Medical School of New York University, Bellvue Hospital, NYC
Sept. 28-29	**Current Therapy in Pediatric Practice.** Cleveland Clinic and Bunts Institute, 2020 East 93rd St., Cleveland
Sept. 28-30	**Michigan State Medical Society.** Grand Rapids
Sept. 28-30	**Mississippi Valley Med. Soc.,** annual meeting. Jefferson Hotel, St. Louis
Sept. 28-Oct. 1	**Oregon State Medical Society.** Portland
Oct. 1	**California Society of Internal Medicine.** Biltmore Hotel, Santa Barbara
Oct. 3-6	**Fall Clinical Conference, Kansas City-Southwest Clinical Society.** Municipal Auditorium, Kansas City, Missouri
Oct. 3-7	**Postgraduate Course in Chest Diseases.** Am. Coll. Chest Physicians, Hotel Knickerbocker, Chicago
Oct. 3-7	**Thoracic Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 3-14	**General Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 3-14	**Radiology.** Cook Co. Grad. Sch. Med., Chicago
Oct. 5	**Midwest Conference on Rheumatic Diseases.** Ford Hospital, Detroit
Oct. 5-7	**San Francisco Heart Assn.,** 26th annual symposium on heart disease. St. Francis Hotel, San Francisco
Oct. 6-8	**Academy of Psychosomatic Medicine,** 2nd annual meeting. Plaza Hotel, New York City
Oct. 6-8	**Clinical Chemistry for Physicians.** Ctr. for Contin. Study, U. of Minn., Minneapolis
Oct. 7-8	**Pulmonary Diseases for General Practitioners.** Ohio State University Coll. of Med., Columbus
Oct. 8	**AMA Legislative Conference.** Chicago
Oct. 9	**AMA Medicolegal Symposium.** Chicago
Oct. 9-12	**California Academy of General Practice,** Sheraton Palace Hotel, San Francisco
Oct. 9-12	**Calif. Academy of General Practice,** 1955 scientific assembly. Sheraton-Palace Hotel, San Francisco
Oct. 10-12	**Clinical Electrocardiography.** U. of Colo. Med. Ctr., Denver
Oct. 10-14	**Esophageal Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-14	**Occupational Skin Problems,** University of Cincinnati
Oct. 10-14	**Pediatric Cardiology.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	**Clinical Uses of Radiosotopes.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	**Electrocardiography and Heart Disease.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	**Surgical Technic.** Cook County Grad. Sch. Med., Chicago
Oct. 10-21	**Urology.** Cook County Graduate School of Medicine, Chicago
Oct. 10-21	**New York Academy of Medicine,** 28th graduate fortnight. "Problems of Aging," New York City
Oct. 10-Nov. 4	**Surgical Technic, Surgical Anatomy & Clin. Surgery.** Cook County Grad. Sch. Med., Chicago
Oct. 11	**San Diego County Heart Assn.,** annual symposium on heart disease. U. S. Naval Hosp., Balboa Park, San Diego
Oct. 12-13	**Los Angeles County Heart Assn.,** 25th annual symposium on cardiovascular diseases. Wilshire-Ebell Theater, Los Angeles
Oct. 13-15	**Fourth Western Cardiology Conf.** U. of Colo. Med. Ctr., Denver
Oct. 15	**AMA Legislative Conference.** Omaha
Oct. 16	**AMA Medicolegal Symposium.** Omaha
Oct. 17-19	**Conference on Applied Therapeutics.** U. of Calif., San Francisco
Oct. 17-21	**General Surgery.** Cook Co. Grad. Sch. Med., Chicago
Oct. 17-21	**Pediatric Cardiology.** Cook County Grad. Sch. of Med., Chicago
Oct. 17-21	**Surgery of Colon and Rectum.** Cook County Grad. Sch. Med., Chicago
Oct. 17-28	**Fractures and Traumatic Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 17-28	**Dermatology.** Cook County Graduate School of Medicine, Chicago
Oct. 17-Nov 11	**Surgical Technic, Surgical Anatomy and Clinical Surgery.** Cook Co. Grad. Sch. Med., Chicago
Oct. 19	**Minnesota AGP Annual Fall Refresher.** Radisson Hotel, Minneapolis
Oct. 20-21	**Techniqucs in General Practice.** Ctr. for Continuation Study, U. of Minnesota, Minneapolis
Oct. 20-21	**Conference on Obstetrics & Gynecology.** U. of Calif., San Francisco

(Continued on page xlii)

Editorials

HAVE YOU MISSED A VALUABLE EXPERIENCE?

Here are some remarks relative to the preceptorship program in Iowa. A preceptee says, "The preceptor program has been a magnificent experience. My classmates and I have a number of reasons for thinking so. (1) We have seen a wealth of clinical material of varied nature and obliquity. (2) We have met the patient in an ambulatory state and have seen some of the problems indigenous to patient management at that level. (3) Daily we have seen the necessity for and the methods used in establishing rapport between doctor and patient. (4) Methods of keeping adequate medical and financial records have been open to our inspection and inquiry. (5) We have found our preceptors assuming the role of the patient instructor, willing to spend considerable time, even in a busy practice, to enable our experience to become fuller and our understanding of problems as a whole to be broadened."

One of this summer's preceptees has said, "It seems that I have learned as much this month as I did in the preceding three years." This statement certainly was not intended as disparagement of our formal medical education, but it serves to emphasize both the enthusiastic reaction of the students and also the tremendous value of the practical information and the insight that they can derive from watching private practitioners at work.

Another student remarked, "We were especially pleased by the warm, friendly reception we received when we were allowed to enter our preceptors' homes and participate in their everyday lives. We wish to thank them, their wives and their families for making this opportunity available and so vital to us, the Class of 1956."

A preceptor says, "I have enjoyed and I feel that I have profited from my summer contacts with medical students. (1) The program has afforded me a wonderful opportunity of correlating my methods with those being taught in our medical schools at present. (2) It has been a real inspiration for me to observe these fine young men, and to note their very active interest in all phases of medical practice. (3) I have enjoyed the companionship of a senior student for one month each summer during each of the last four years, and I feel that their keen insight into matters of diagnosis and treatment speaks well for their basic training, their sincere interest in medicine and their future success."

The preceptorship program offers to many students their only opportunity of learning what the really comprehensive practice embraces and includes. It would be unfortunate if any of them were to go into a specialty without having had that first-hand contact with general practice.

In order to help give senior students this broadened insight into the field of general medicine, more physicians should take preceptees. The inconvenience of doing so may be appreciable at times, but the rewards are worthwhile. Men who have participated in the program have found it a pleasure to have these young gentlemen in their homes. We must not let the preceptorship system die for lack of our cooperation.

If you have not had a preceptee, why not avail yourself of this fine chance that is offered you to help yourself and to help medical education in Iowa?

EARLY AMBULATION

Within the past 15 years there has been a complete reversal in the medical profession's official attitude as regards the optimal period of hospitalization following surgery. Many factors have been responsible for this change. For one thing, doctors have been zealous, as always, in looking for ways of sparing their patients any unnecessary prolongation of disability and discomfort. And, in addition, they have sought to reduce the costs that are directly or indirectly the consequences of illness and hospitalization.

Physicians don't have what could be described as a proprietary interest in the success of Blue Cross and Blue Shield, the principal agencies by which the public is provided prepaid hospitalization, surgery and inpatient medical care, for those Plans operate on a non-profit basis. But their concern for the public welfare makes them very highly concerned about keeping those plans solvent and about preventing any skyrocketing of premiums. Just how valuable their efforts in that direction can be is shown by the estimate made by an official of Blue Cross in a neighboring state that his organization saves $10,000,000 per year every time that the average length of hospitalization is reduced by a single day.

In the June, 1955, issue of the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY,* Dr. D. J. Lighthouser, of Detroit, reports upon an investigation he has conducted in early ambulation, one that he calls a "rapid recovery experiment." He has been so successful in it that he now maintains it is routinely advisable to have surgical patients get out of bed three times in rapid succession immediately after their recovery from anesthetic,

* 54:697-700, 702, (June) 1955.

provided only that nurses are present to supervise the procedure.

"Every surgeon can convince himself of the value of immediate postoperative exercise if he will perform this 'rapid recovery experiment' on a patient who has undergone a major operation, e.g., cholecystectomy or gastrectomy," Dr. Lighthouser declares. "Immediately after the patient recovers from the anesthetic, assist him to get out of bed from the recumbent position and instruct him how to do it. Have him turn on his right side, then sit up with his feet over the edge of the bed, stand on the stool, then step down to the floor. Have him walk a few steps and then return to bed and resume recumbency for about a minute. Then repeat the procedure twice. Each of the three times that he gets out of bed, insist that he walk as many steps as possible; each time he will be able to go farther. After this exercise period (about five minutes) is completed, allow the patient to rest in the recumbent position for ten minutes, and then visit him again. You will be amazed at the improvement in his general condition."

"The surgeon should perform this experiment personally on three different patients," he contends. "By then he should be so thoroughly convinced of its efficacy that he will be ready to adopt it as routine procedure, and to train his assistants and nurses in the management of patients during this immediate postoperative exercise."

"After this triple-rising procedure," according to Dr. Lighthouser, "most patients can get out of bed by themselves without assistance, and they are instructed that walking should be repeated frequently. If the patient is somewhat resistant or fearful, then each time he gets out of bed, have him bend over and touch the floor several times. This relieves any faintness and gives the patient confidence. If the patient should be still lagging or fearful on the day after operation, urge him to walk more rapidly or to walk up a flight of stairs. Encouragement and aggressive assistance are necessary to instill confidence in some patients, and become routine responsibilities of surgeons, interns and nurses in hospitals where early ambulation is effectively practiced."

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529-36th Street, Des Moines 12, Iowa.

A DEFINITION TO END ALL DEFINITIONS

The federal government's bureaucrats, it seems, have no monopoly upon gobbledegook. Following the example of the editor of the MISSISSIPPI VALLEY MEDICAL JOURNAL, we suggest that you read this aloud so as to test the vital capacity of your lungs, even if you don't "dig the lingo."

"Definition of Chiropractic: The term chiropractic when used in this act shall be construed to mean and be the name given to the study and application of a universal philosophy of biology, theology, theosophy, health, disease, death, the cause of disease and the art permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other by hand, thus correcting all subluxations of the articulations of the spinal column, for the purpose of permitting the recreation of all normal cyclic currents through nerves that were formerly not permitted to be transmitted, through impingement, but have now assumed their normal size and capacity for condition as they emanate through intervertebral foramina—the expressions of which were formerly excessive or partially lacking—named disease."—*New Jersey state law enacted in 1920.*

LETTER TO THE EDITOR

Sir:

May I enlist your cooperation in my attempt to establish my priority in the use of hypnoanesthesia (psychosomatic anesthesia) for obstetrical procedures in certain geographical locations? I shall be grateful for your assistance in this endeavor.

I did my first delivery employing hynosis, without adjunctive chemical anesthesia by either inhalation or infiltration, at St. Anthony's Hospital, Carroll, on January 11, 1955. In that instance, I was the obstetrical operator as well as the hypnotist. I shall appreciate information as to whether a delivery of that type had been done by any other doctor in the state of Iowa prior to that date.

Dr. Stanley A. Hill, of Corinth, Mississippi, a classmate of mine, has issued a challenge concerning priority for obstetrical procedures under that type of anesthesia in his state. According to his most recent letter to me, the Stevens twins, born at Corinth on June 16, 1955, under his attendance as obstetrician and mine as hypnotist was the first obstetrical procedure performed under hypnosis in the state of Mississippi.

Furthermore, insofar as I am aware, that was the first set of twins born under hypnoanesthesia in the entire United States.

It is therefore my belief that I can validly claim the following priorities in the use of hypnoanesthesia for obstetrical procedures:

1. Iowa . . . at St. Anthony's Hospital, Carroll, January 11, 1955.
2. Mississippi . . . at Corinth General Hospital, Corinth, June 16, 1955.
3. United States . . . first twins delivered under hypnoanesthesia.

Very truly yours,

J. Lawrence Cochran, M.D.

SHORT COURSES AT IOWA CITY

Dates and topics have been announced for 13 one, two and three day postgraduate meetings during the 1955-1956 academic year at the College of Medicine of the State University of Iowa, Iowa City.

Trauma and Fractures, September 16 and 17. Papers will be presented on organization of community facilities following a mass disaster. There will be an intensive review of fluid and electrolyte balance as it applies to acute surgical problems. An informal roundtable discussion on problem fractures is being planned, and visitors are encouraged to bring abstracts of cases and X-ray pictures from their own practices. In addition, there will be papers and moving picture demonstrations of the handling of open wounds, acute thoracic wounds and other fresh injuries.

Pediatrics, September 23 and 24. Dr. F. C. Robbins, of Cleveland, a recent recipient of the Nobel Prize in medicine, will speak on viral and rickettsial illnesses; Dr. Herman Yannet, of Southbury Connecticut, will talk on the management of the mentally retarded child; and Dr. C. A. Janeway, of Boston, and members of the SUI Department of Pediatrics are also to present papers. Entertainment will be provided for the wives of the registrants.

Thyroid Diseases, October 12. An intensive program will be offered covering thyroid function tests, hyperthyroidism, myxedema, subacute and chronic thyroiditis and carcinoma of the thyroid. The therapeutic use of thiouracil derivatives, radioiodine, whole thyroid gland, thyroxin and triiodothyronine will be considered.

Dermatology and Syphilology, October 28. Special emphasis will be placed upon the use and abuse of serologic tests.

Obstetrics and Gynecology, November 4 and 5. Such problems as infertility, endocrine therapy, treatment of malignant diseases and obstetrical complications will be emphasized. There will be two guest speakers.

Hematology, November 17. This continuation course will deal with the basic physiology of anemia, newer diagnostic technics, bone marrow in disease, the acute and chronic blood loss anemia, the role of transfusion in anemia, and the hemolytic anemias. There will be a hematology clinic, with panel discussion, and there will be a clinical-pathologic case presentation.

Diabetes, December 8. Emphasis will be placed on diagnosis, treatment and complications. Specific problems in therapy will be discussed. Material concerning newer concepts in the development of degenerative disease will be presented.

Anesthesia, January 23, 24 and 25. The course will be a two and a half day program. From suggestions submitted it is planned to include discussions on such topics as depressant drugs, ventilation and circulation. It is anticipated that at least two prominent authorities in the field will participate.

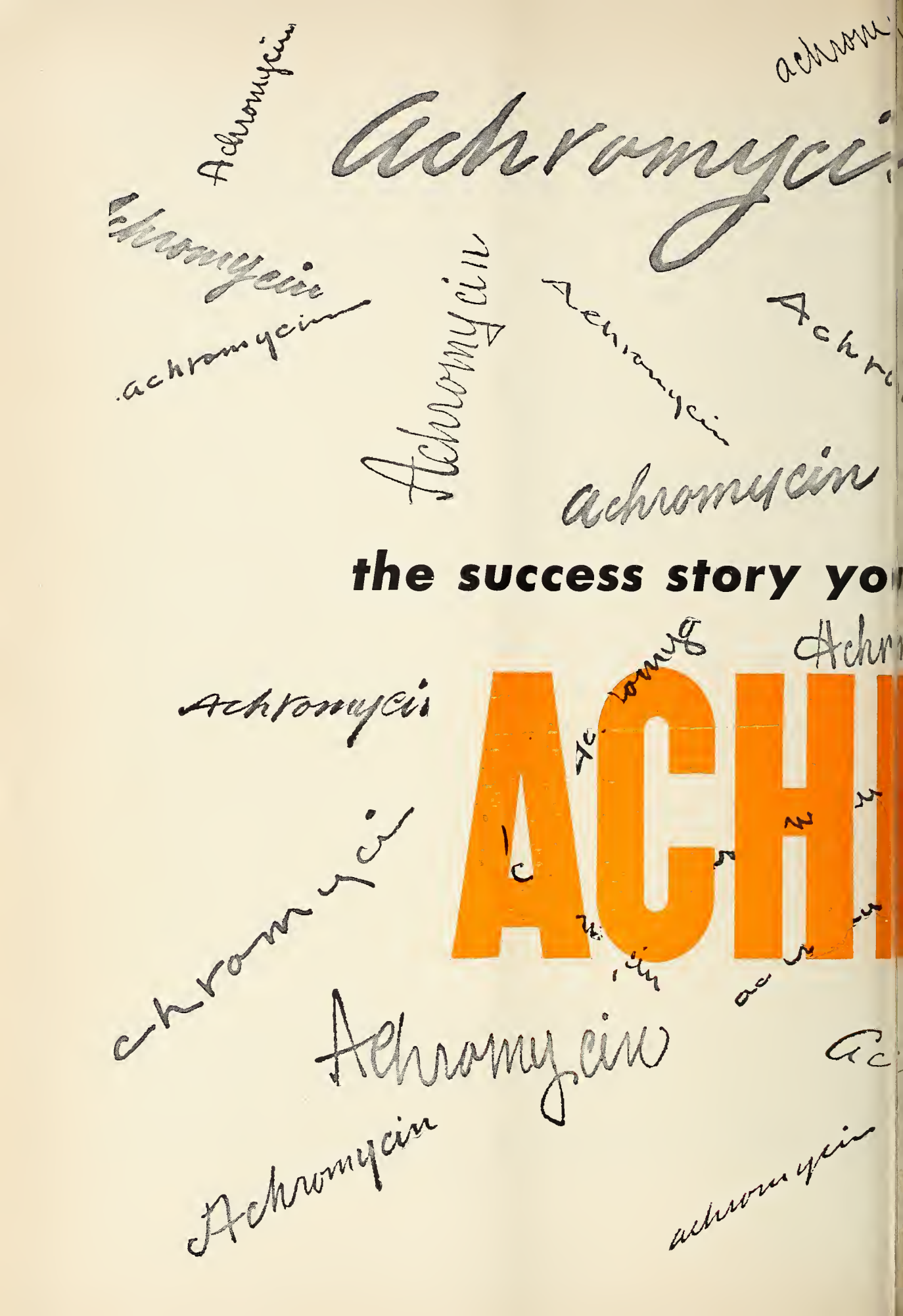
Refresher Course for the General Physician, February 15-18. The course will be presented in cooperation with the Iowa Academy of General Practice. It is planned to have a number of guest speakers, as well as representatives from the College of Medicine and other practicing physicians in the state. Participating departments will include Pediatrics, Obstetrics and Gynecology, Internal Medicine, Surgery, Urology and Dermatology. Dr. W. C. Keettel, directory of Postgraduate Medical Studies at SUI, invites suggestions about what topics the doctors who plan to attend would like to have included in the program.

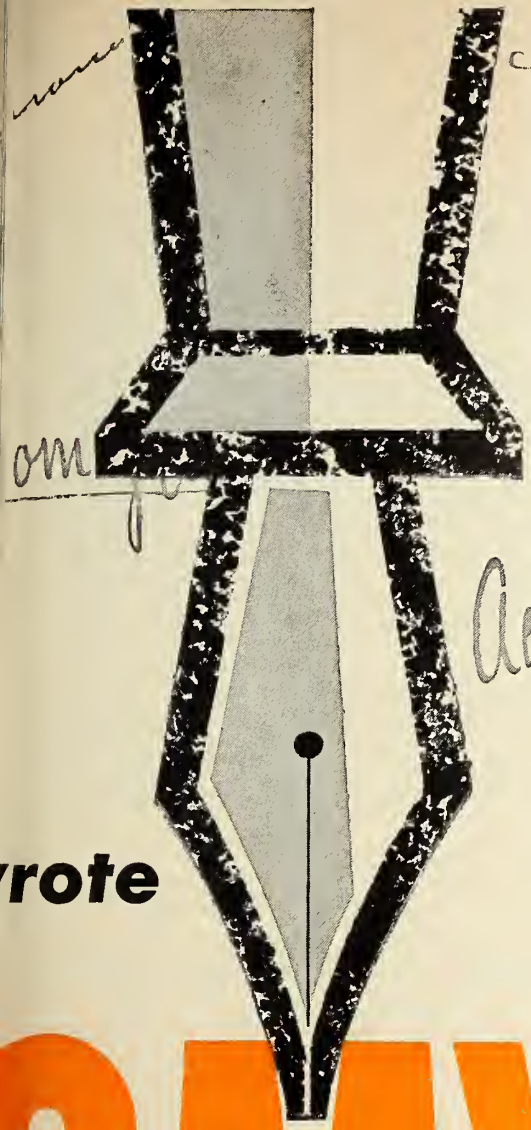
Recent Advances in the Diagnosis of Heart Disease Remediable by Surgery, March 29. There will be discussions and demonstrations of the diagnostic methods of physical examination, electrocardiography, ballistocardiography, angiocardiography, angiography and catheterization technics.

Urology, March 30 and 31. A day and a half conference will cover recent developments in the field, such as discoveries in the management of carcinoma of the prostate, fluid balance as related to urology, the pre- and postoperative management of patients with prostatism, the management of chronic infections of the prostate, the management of bladder irritability in women and new developments as regards infertility. The medical and surgical management of urolithiasis will be gone into intensively.

Neurology, April 11. Among the topics considered will be cerebrovascular disease, and convulsive seizures and trauma to the brain and spinal cord. A guest lecturer will be present. There will be an opportunity for informal discussions.

Allergy, May 16. Speakers will include members of the staff of the SUI Department of Internal Medicine and one guest.


Achromycin
achromycin
the success story yo
ACH



rote

OMYCIN*

HYDROCHLORIDE

Tetracycline HCl *Lederle*

When you have prescribed ACHROMYCIN you have confirmed its advantages—again and again. It is well tolerated by patients of every age. Compared with certain other antibiotics, it has a broader spectrum, diffuses more rapidly, is more soluble, and is more stable in solution. It provides prompt control of many infections including those caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa. Furthermore, it is a *quality* product; every gram is made under rigid control in Lederle's *own* laboratory.

ACHROMYCIN, a major therapeutic agent now...growing in stature each day!

dry-filled capsules

RLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* PEARL RIVER, NEW YORK

*REG. U. S. PAT. OFF.

Lederle

SUI GETS KELLOGG SUBSIDY

A grant of $109,000 for support of the nation's first Institute of Agricultural Medicine has been awarded to the State University of Iowa by the W. K. Kellogg Foundation. The Institute will be established Sept. 1.

According to University President Virgil M. Hancher, the Iowa State Board of Regents has approved acceptance of the award, $37,000 of which has been made available for the Institute's use during the year beginning Sept. 1. During 1956, the Foundation will provide $44,000, followed by the remaining $28,000 in 1957.

Matching funds from the state's appropriations for support of the University are anticipated for the last year of the grant, with the basic support of the Institute expected to come from such appropriations thereafter.

President Hancher was notified of the grant by Dr. Emory Morris, Foundation president and general director, and Dr. M. R. Kinde, director of the Foundation's division of medicine and public health.

Proposed publicly April by Dr. Norman B. Nelson, dean of the University's college of medicine, the Institute will be set up to conduct medical and social research on the diseases to which farm people are especially susceptible, and to develop new preventive measures to safeguard the farmer's health.

The new unit will be established under the jurisdiction of Dr. Franklin H. Top, professor and head of the department of hygiene and preventive medicine at SUI, with the Institute functioning as a division of that department.

In studies of specific diseases or conditions, the Institute will collaborate with and draw upon the resources of the Division of Veterinary Medicine at Iowa State College, the various departments in SUI's college of medicine and the State Hygienic Laboratories at SUI.

Dr. Top says 88 known diseases are transmitted from animal to man, and that more than half of these have been found in Iowa. In addition to such diseases and the problems which they pose, the Institute will bring curative or preventive studies to bear upon:

Skin diseases due to contact with chemicals and plants; impurities in water, milk, milk products and other foods; the effects of chemical fertilizers and insect sprays on the agricultural worker and the consumer; possible effects upon the health of consumers caused by the widescale use of certain drugs in animals to accelerate growth for food purposes; mental depression among rural workers, and farm accidents.

Dr. Top says the Institute's research findings and the recommendations of its staff regarding prevention of disease and injury will be made available to physicians throughout the state for application in their treatment and counselling of rural patients. The Institute also will work toward the development of new methods of health education for rural populations so that information growing out of the research may reach the farm worker in understandable terms.

Divisions of industrial hygiene already have been established in some of the nation's colleges in an attempt to improve the health of industrial workers. SUI's Institute of Agricultural Medicine will have the same goal for farmers, Dr. Top says.

One of the Institute's first tasks will be that of determining "the number, extent and importance of health problems confronting the farmer."

All known sources of information must be tapped, Dr. Top explains, and a close working relationship must be developed with farm organizations, health departments, physicians and hospitals.

After the rural health picture has been drawn, the Institute will assess each problem on the basis of adequacy or inadequacy of present methods of prevention or treatment, and the necessity of conducting or encouraging research on the problem.

The Institute's basic staff will include an epidemiologist, a statistician, a social anthropologist and a veterinarian.

CLINICAL CHEMISTRY FOR PHYSICIANS

A continuation course in Clinical Chemistry for Physicians will be presented by the University of Minnesota on October 6, 7 and 8, 1955. It has been designed to help the physician in setting up and supervising laboratory procedures in his own office or in his local hospital. Attendance will be strictly limited, and instruction will consist principally of actual experience at the laboratory benches. Physicians are invited to make reservations by writing to Robert B. Howard, M.D., Director, Department of Continuation Medical Education, University of Minnesota, Minneapolis 14.

WEIGHT CONTROL

On January 18-20, 1955, a weight-control colloquium was held at Iowa State College, in Ames. Topics for the meeting were subdivided into four groups: (1) some problems in weight control; (2) weight problems among adults; (3) weight problems among children; and (4) weight control measures and programs.

An attractive booklet has been prepared furnishing the papers that were read at that conference, replete with illustrations. Undoubtedly many members of the Iowa State Medical Society would be most happy to have this book for perusal and for inclusion in their libraries.

Copies can be obtained gratis from the Iowa Dairy Promotion Association, 1002 Grand Avenue, Des Moines 9.

MEETING ON RURAL HEALTH



A part of Medicine's contingent at the rural health conference held on August 10 at the Kirkwood Hotel, Des Moines, included (left to right) Dr. A. G. Felter, Dr. J. W. Gauger, Dr. E. G. Zimmerer, Miss Mary Sloan (secretary), Dr. S. P. Leinbach and Mr. Aubrey Gates.

Members of the Rural Health Committee of the Iowa State Medical Society met with leaders of the Iowa Farm Bureau Federation, Iowa Extension Service, Iowa Health Council, State Department of Health and SUI College of Medicine at the Kirkwood Hotel, in Des Moines, on August 11.

Mr. Aubrey Gates, field director of the AMA Rural Health Council, as principal speaker, pointed out the increasing need for farm safety programs, for preventive medicine in the control of diseases, particularly those attributable to livestock handling, and for scholarships for medical students. He emphasized that there is a need for everyone to assume personal responsibility for his own health.

Three major tasks of every state medical association, according to Mr. Gates, are (1) to encourage every family to select a family physician, (2) to urge each community to have an adequate health organization and (3) to advocate prepayment medical plans.

Dean Nelson, of the SUI College of Medicine, reported on the new Division of Agricultural Medicine being established at Iowa City through the assistance of a Kellogg Foundation grant.

Prevention of farm accidents aroused lively discussion, with subsequent recommendations that publicity be aimed at the local level to make people increasingly aware of the many accident hazards. Also, it was agreed, people should be urged to eat good meals regularly and introduce between-meal snacks so that machine operators may have brief rest periods.

Information was given to the group about the preceptorship program and the physician placement service of the Iowa State Medical Society. All persons present expressed considerable interest in working together toward a common goal of better health care for Iowans.

It appeared that the ground work was being laid for future progress. At a meeting planned for the immediate future, specific projects will be outlined, on which the groups may work together to improve rural health care.

BOY SCOUT FUND-RAISING

The Iowa Coordinated Finance Campaign, Boy Scouts of America, will have its kick-off on Tuesday, October 25. The twelve Boy Scout Councils which administer the program of Cub Scouting, Boy Scouting, and Exploring in Iowa are supported through the Community Chests, and United Funds in the localities where such campaigns are conducted. They are supported by independent fund-raising projects where there are no Community Chests or United Funds.

This means that in the vast majority of communities independent campaigns must be conducted. It is hoped that doctors will support this cause through their personal participation, both monetarily and through their volunteer work.

President's Page

I want to commend the Committee on Rural Health for its aggressive work in dealing with rural medical problems. Its efforts in developing the preceptor program for medical students is worthy of note. The Committee is also making a real contribution in the assistance it is giving to the Physician Placement Bureau of the Iowa State Medical Society in analyzing prospective placement openings and in screening the doctors seeking locations in Iowa.

It is reported that the rural health conference sponsored by the Rural Health Committee of the Iowa State Medical Society was a huge success. That conference was held in Des Moines during the afternoon and evening of August 10, and was attended by key representatives of state organizations interested in rural health problems. There were representives of the Iowa State College Extension Service, staff members of the SUI College of Medicine, officers of the Farm Bureau and of the Iowa Health Council, and, in addition, a representative from the Council on Rural Health of the AMA. The purpose of the conference was to discuss problems of rural health and possible solutions for them. I believe that as a result of that meeting a groundwork has been laid for improved understanding among the interested organizations that will enable them to develop programs at the local level for improving the health of rural residents.

As president, I wish to thank the Committee for its fine work and to wish it continued success.

L. R. Coffin, M.D.

President

THE JOURNAL *Book Shelf*



BOOK REVIEWS

PUBLIC RELATIONS IN MEDICAL PRACTICE, by *James E. Bryan.* (Baltimore, The Williams and Wilkins Company, 1954. $5.00).

The author has very ably presented the public-relations problem as it is encountered by every practising physician.

The book is well balanced. The first chapter, entitled "Introduction," gives the background of the development of public relations in the field of medicine and is particularly good. Likewise, the second chapter, "The Doctor and His Patient," deserves special commendation.

This reviewer considers that all phases of the P-R problem have been handled so well that he feels reading it should be one of the requirements for graduation from medical school. Certainly, men could profit much more from reading it at that time than they could from reading it ten years later, when their habits and desires have become fixed. But however that may be, I would recommend it in addition as excellent reading for anyone in the active practice of medicine.—*Otto N. Glesne,* M.D.

OBSTETRICS, by *J. P. Greenhill,* M.D., Eleventh Edition. (Philadelphia, W. B. Saunders Company, 1955. $14.00).

This text which has for many years been published under the names of Drs. DeLee and Greenhill now appears for the first time under Dr. Greenhill's name alone. For some time it has been one of the two or three outstanding treatments of obstetrics published in this country.

The book is extremely well printed, in easy-to-read type, and it has magnificent illustrations, 125 of which are new. Dr. Greenhill has collaborated with 14 other medical experts, with the result that each topic is discussed in a very authoritative manner. Since the last edition, there are new chapters on roentgenology in obstetrics, erythroblastosis and the RH factor, anesthesia and analgesic diseases of the nervous system, endocrine changes in diseases during pregnancy, induction of labor and prolonged labor.

New data have been added on several subjects which are of particular interest to me—namely, abruptio placentae, with particular regard to the severe hemorrhages associated with an insufficiency of fibrinogen, lower nephron syndrome, incoordinate uterine action, cerebral palsy and toxemias of pregnancy.

This edition covers the gamut of both normal and operative obstetrics, and is most highly recommended to students, to general practitioners doing obstetrics, obstetricians and all others interested in this most interesting and complex field.—*Don O. Newland,* M.D.

CURRENT THERAPY, ed. by *Howard F. Conn,* M.D. (Philadelphia, W. B. Saunders Co., 1955. $11.00).

I first reviewed this book several years ago. I regard it now, as I did then, as a "natural." It fulfills a definite need in every practicing physician's office, for it briefly discusses up-to-date treatment of most of the conditions we see in our daily practice.

This year, as in years past, Dr. Conn has gathered under 12 top-notch consultants about 250 contributors who are, in turn, top notch in their respective fields. They give concise discussions of treatment of each particular disease. Often in controversial areas, two or more contributors discuss methods of treatment which are at variance, one with another, so that the reader may take his choice. The book is divided into sections such as "Infectious Diseases," "Diseases of the Respiratory System," "Diseases of the Cardiovascular System," etc., but easy reference to particular conditions can be found in the excellent index. Immediately before the index are listed a "Roster of Drugs" and certain tables of metric and apothecary systems and a table for making percentage solutions.

The book, although smaller than previous editions, is a large one, excellently conceived and well written. There is no chaff. I am sure that every doctor who has owned an earlier edition will want this up-to-date one. I hope that each practicing physician who doesn't have one will get one—and I am not on the payroll of the W. B. Saunders Co.—*Daniel A. Glomset,* M.D.

SMOKING AND CANCER, by *Alton Ochsner,* M.D., (New York, Messner, 1954. $2.00).

"This book may save your life"—so says the jacket of this little (86-page) book intended for lay reading!

The first paragraph flatly states in bold type: "Cigarettes cause Cancer."

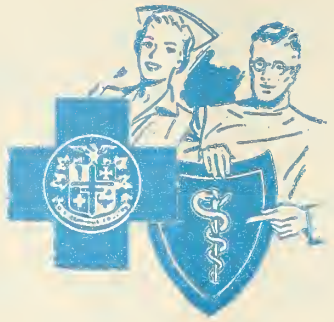
The author, playing the role of crusader, has prepared a treatise which is replete with florid commentary and liberal, unweighted references to the literature. His apparent objective is to frighten or otherwise coerce people into giving up smoking.

Perhaps that objective is laudable, but the book is so obviously opinionated that it does not merit detailed review in a scientific journal.—*R. F. Birge,* M.D.

THE YEAR BOOK OF ORTHOPEDICS AND TRAUMATIC SURGERY (1954-1955 Year Book Series), ed. by *Edward L. Compere,* M.D., (Chicago, The Year Book Publishers, Inc., 1955. $6.00).

It is a pleasure to review this volume, so adequately edited by Dr. Compere. Not only is it possible to refer to it quickly for information regarding advances in orthopedic and traumatic surgery during the year, but also to obtain from it the advantages of numerous, well chosen illustrations. All surgeons will do well to include this book in their libraries. —*Everett M. George,* M.D.

BLUE CROSS



BLUE SHIELD

Providing Medical Care For the Aged

Today we are faced with an ever-increasing problem of financing medical care for the population group above 65 years of age. Each year a larger number of people fall within that category.

It is a known fact that medical costs for such people are about three times the average. It is ironical that the cost of care should be greatest when the patient is least able to pay, but though some people have pensions in addition to Social Security benefits, almost everyone's income drops drastically upon his retiring from his life's work.

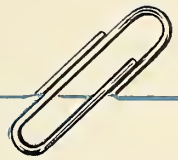
Thus, Blue Cross and Blue Shield are faced with a socio-economic problem, one that will require much thoughtful consideration from doctors and hospital officials in every city and town.

The health care of elderly people is a community problem, and Blue Cross and Blue Shield are community programs sponsored by hospitals and doctors. Isn't it logical, then, that we should seek a solution through the voluntary prepayment method upon which those Plans operate?

If we fail to meet this challenge, the government will provide health care for elderly people. The doctor will have no voice, and when once it has started to do so, we shall have no guarantee that the government will restrict the benefits of its system to people over 65 years of age. If machinery were set in motion to provide care at government expense for that group, why couldn't the same benefits be extended to all people over 50?

Shouldn't Blue Cross-Blue Shield be sold as a community program at an over-all premium rate sufficiently high to cover the medical costs of beneficiaries of all ages?

Your Blue Shield President Reports:



In a series of reports of which this is the first, our aim is to acquaint the profession with the developments which are taking place in Blue Shield. In this issue I want to give the profession a report on the activities of the Blue Shield Board in carrying out the recommendations of the 1955 session of the House of Delegates to study present inequities in our fee schedule and develop a second contract with a higher income level and a correspondingly higher fee schedule.

A board meeting was called May 15 to study these recommendations and a Medical Advisory Committee was appointed for the purpose of implementing these projects. This committee has got in touch with the secretaries of the specialty groups, suggesting that they develop fee schedules which they deem realistic and at premium rates to make them saleable and forward them to the committee. It is hoped we can come forward with a well balanced composite schedule.

At our board meeting July 24 the Medical Advisory Committee reported that not all specialty groups had responded to the request but a number had supplied the desired information. When the survey has been completed, we expect to develop a composite schedule and compute a rate to cover the enlarged benefits to be provided in the second contract.

The chairman of the Medical Advisory Committee expects to call a meeting of his committee to consider revisions made in the schedule and subsequently the committee expects to meet with representatives from the various specialties.

The Medical Advisory Committee will then be in a position to make its recommendations to the Blue Shield Board. We, as your official representatives, will study the over-all plan and make our report to the medical profession as a whole.

Sincerely,

Martin L. Olsen M. D.

President

Iowa Academy of General Practice

OUR ANNUAL MEETING

The Annual Scientific Assembly of the Iowa Academy of General Practice will be held at the Hotel Savery, in Des Moines, on September 15 and 16. The excellent program that has been assembled is synopsized in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY (August issue) and in the HAWKEYE GP NEWS. The topics to be discussed are correlated so as to cover in proper relation those problems of mental stress that physicians contact daily.

The Ernest E. Shaw memorial lecture, at 2:15 p.m., September 16, will be the highlight of the postgraduate course.

All members of the Academy are urged to attend, and our friends or prospective members are cordially invited. All of the men are encouraged to bring their wives to the meeting. The ladies will be more than welcome, and they will enjoy many of the lectures as well as the luncheons and the banquet.

Hotel reservations should be made immediately. Our attendance should be close to three-fourths of our membership.

Postgraduate credit (formal): 10 hours.

Yours sincerely,
FRANK D. MCCARTHY, M.D.
President

MEMBERSHIP REQUIREMENTS INCREASED

The AAGP Congress of Delegates increased the membership requirements effective January 1, 1956. The candidate for membership will be required to have completed *one* of the following: (1) Two years of graduate training acceptable to and approved by the Commission on Education; (2) One year of graduate training acceptable to and approved by the Commission on Education followed by two years of general practice; or (3) Three years of general practice.

Eligibility requirements effective until January 1, 1956, for active members are "Physicians engaged in active general practice who meet requirements of the By-Laws."

It is suggested that those who have planned to join, but have just been putting it off, should take action at once. This advice applies especially to the man who has been in practice less than three years.

NEW HEADQUARTERS OFFICE

The Board of Directors has established a new office for the I.A.G.P. in downtown Des Moines and has secured the services of an executive secretary so that the work can be centralized and the details handled more efficiently. The office is located at 911 Bankers Trust Building.

The executive secretary is Mrs. Isabelle Wandling, and she will be in the office from 1:00 p.m. to 5:00 p.m. Monday through Friday. Correspondence may be directed to her or to Donald H. Kast, M.D., secretary treasurer. You are welcome to stop in and get acquainted.

CHANGES IN BY-LAWS

As time moves ahead, we are confronted with the problem of making our By-Laws fit the changes that have occurred. Every few years, changes must be made to bring this document up to date and to clarify the statements. The HAWKEYE GP NEWS carried the proposed changes in the By-Laws of the Academy. They should be read and studied by the members so that questions at the Annual Meeting can be quickly answered.

GENERAL PRACTITIONERS' COURSES AT MINNEAPOLIS

The Minnesota Academy of General Practice will hold its fifth annual Fall Refresher at the Radisson Hotel, Minneapolis, on Wednesday, October 19, starting promptly at 8:30. Seven hours of accredited postgraduate study will be provided in the form of concentrated instruction and lectures by 14 eminent medical authorities. Some of the principal speakers are Drs. Bert Seligman, of Toledo; Gene Stollerman, of the University of Chicago; and George Logan and H. E. Rynearson, of Rochester, Minnesota.

Then on the next two days, Thursday and Friday, October 20 and 21, the University of Minnesota will offer a continuation course in Tech-

niques in General Practice, to be held at the Center for Continuation Study and University of Minnesota Hospitals. The course will consist principally of demonstrations of certain technics of interest and importance to the physician practicing general medicine such as a tracheal intubation, tracheotomy and exchange transfusion. Registration will be limited. Doctors who are interested are invited to communicate with the Director of Postgraduate Medical Education, University of Minnesota, Minneapolis 14.

CONFERENCE ON TUBERCULOSIS

At the 42nd Annual Conference of the Mississippi Valley Conference on Tuberculosis and the Mississippi Valley Trudeau Society, in the Savery Hotel, Des Moines, on October 13, 14 and 15, the program is to be as follows. AAGP members can earn 5 hours of informal credit by attendance.

Thursday morning, October 13

10:00 Introduction.—Harold M. Coon, M.D., president, Mississippi Valley Conference on Tuberculosis

"What NTA Is Thinking"—James E. Perkins, M.D., Managing Director, National Tuberculosis Association

"Tuberculosis—Yesterday"—Harold M. Coon, M.D.

"Tuberculosis—Today"—E. P. K. Fenger, M.D., president, Mississippi Valley Trudeau Society

"Tuberculosis—The Job Is Done—Or Is It?—Edward T. Blomquist, M.D., medical director, Tuberculosis Program, Division of Special Health Services, United States Public Health Service, Washington, D. C.

12:00 Mississippi Valley Conference Governing Council (Short business session)

LUNCHEON

12:30 Welcome—Hon. Leo A. Hoegh, governor of Iowa
Presentation of Dearholt Medal

Thursday afternoon, October 13

2:30 "Value of Tuberculin Testing as Case-finding Method"—Lawrence E. Wood, M.D., assistant professor of medicine, University of Kansas Medical Center, Kansas City, Kansas. Discussant: Michael L. Furcolow, M.D., medical director, USPHS Field Station, and associate clinical professor of medicine, University of Kansas Medical Center, Kansas City, Kansas

"Routine X-ray of Hospital Admissions"—John F. Gardiner, M.D., assistant professor of medicine, Creighton University Medical School, Omaha. Discussant: John F. Briggs, M.D., chairman, Committee on Tuberculosis, Minnesota State Medical Association, St. Paul

"Are Tuberculosis Hospital Admissions Decreasing?"—Leon J. Galinsky, M.D., medical director, Tuberculosis Unit, Broadlawns Polk County Hospital, Des Moines. Discussant: William M. Spear, M.D., superintendent, State Sanatorium, Oakdale, Iowa

Friday morning, October 14

9:30 "Report on the Present Status of Antimicrobial U.S.P.H.S. Cooperative Study"—Harold I. Humphrey, M.D., Columbus, Ohio

10:00 "Respiratory Diseases Transmitted from Animals to Man"—James H. Steele, D.V.M., chief veterinarian, U.S.P.H.S., Atlanta, Georgia

10:30 "Fungus Diseases of the Lungs"—Norman F. Conant, M.D., Duke University, Durham, North Carolina

11:00 "Pulmonary Resection"—Joseph W. Gale, M.D., Madison, Wisconsin

11:30 "Pulmonary Problems in the Aging Population"—Martin J. Fitzpatrick, M.D., Kansas City, Kansas

Friday afternoon, October 14

2:00 "Acute Respiratory Diseases—Studies of Recently Identified Respiratory Viruses (Clinical and Epidemiological)"—William S. Jordan, Jr., M.D., Cleveland

2:30 "Chronic Suppurative Pulmonary Diseases"—(medical) Oscar Bigman, M.D., and N. H. De Janney, M.D., Herman Kiefer Hospital, Detroit; (surgical) Hiram T. Langston, M.D., Chicago

3:00 "Pulmonary Physiology in Clinical Practice"—Steven Horvath, Ph.D., State University of Iowa, Iowa City

3:30 "Inhalation Therapy in Pulmonary Diseases"—Arthur Olsen, M.D., Mayo Clinic, Rochester, Minnesota

4:00 Business Meeting, Mississippi Valley Trudeau Society

Friday evening, October 14

(Meeting open to the public)

8:30 "An International Survey of Treatment Methods for Pulmonary Tuberculosis"—John D. Steele, M.D., immediate past president, American Trudeau Society, and chief of surgery, V-A Hospital, San Fernando, Calif.

"General World Health Problems"—Henry van Zile Hyde, M.D., chief, Division of International Health, H.E.W. Department, Washington, D. C.

Saturday morning, October 15

9:00 Special Television Workshop, presented by the staff of Station WOI-TV, Ames, Iowa. Specific uses of television in health education, case-finding and Christmas Seal sale will be demonstrated.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

"COMMERCIAL" POLIOMYELITIS VACCINE

The term "commercial poliomyelitis vaccine" is used here to indicate serum *other than* that used in the National Foundation for Infantile Paralysis school immunization program.

The purpose of the intra-state distribution system for the commercial vaccine is to make certain that it will be made available on an equitable basis to all eligible persons in every area of the state.

The Iowa program outlined below is that agreed upon by the Iowa State Department of Health, the Iowa State Board of Health and the Governor's Poliomyelitis Vaccine Distribution Advisory Committee.

For the period that the commercial poliomyelities vaccine remains in "short supply" and is allocated to states through the U. S. Public Health Service, the following regulations form the basis for the distribution program.

1. For the present, the groups eligible for the vaccine are:
   a. Those children 5 to 9 years of age not included in the National Foundation for Infantile Paralysis school immunization program.
   b. Pregnant women. (These persons are eligible for two injections each of the vaccine.)

The age group will be broadened as the supply is increased or as the demands of the first age group are met. The first expected increase might be to children from 3 to 11 years of age. Physicians will be informed promptly of any changes in priority groups.

2. The commercial vaccine will be allocated by the U. S. Public Health Service to any state on the basis of that state's number of persons in the priority groups listed above.
3. The Iowa groups referred to above have decided that 10 per cent of the quota of vaccine for Iowa should be reserved for public use for state wards and indigents. However, since our medical advisory groups recommend that no first injections be given before the end of our poliomyelitis epidemic period (end of September or mid-October), Iowa will make no public purchase of vaccine for use before that time. "Public purchase or public agency purchase" means vaccine bought with tax funds or other public money by any agencies of government, such as state, county or city health departments.

The 90 per cent or more of our periodic allocations not deemed necessary for public use by the State Department of Health will be available for purchase by physicians, or any other purchasers buying the vaccine with funds other than tax or other public money through the usual channels of commercial distribution of biologics in Iowa.

4. In order that all Iowa physicians needing the vaccine may receive a just and fair share of the serum distributed through normal channels, Iowa will rely upon:
   a. Local medical societies to guide equitable intra-county distribution of the vaccine. (This appears preferable to the alternate plan under which the State Department of Health would approve the vaccine orders of all physicians, stamp them "approved," and forward them to the manufacturers and distributors.)
   b. Pharmacies or distributors to report any shortage or excess of supply and any requests for excessive amounts of the vaccine.
5. Records. The State Department of Health will receive the following reports which will serve as records of the use and of the equitable distribution of the vaccine.
   a. Reports from the retail pharmacies and surgical supply houses stating the amount of vaccine sold to each physician.
   b. Weekly reports from each physician stating the number of children to whom he has given poliomyelitis vaccine during that week. (It is expected that each physician will keep complete records of the names and ages of the persons vaccinated, site of vaccination, date of vaccination, and name of manufacturer and lot number of vaccine for his own office information.)
6. Any public agencies (such as a local health department or a city well-baby clinic) wishing to procure poliomyelitis vaccine for use

as a function of that agency must have the order approved by the State Department of Health before that order can be filled by the distributor or manufacturer.

7. The State Department of Health will keep physicians and public agencies informed as to the amount of vaccine available to the state, the amount set aside for public purchase, and the names of manufacturers whose vaccine is available for use in the state.

POLIOMYELITIS CASES BY COUNTIES

1955 INCIDENCE THROUGH AUGUST 6

Allamakee	1	Guthrie	3	Palo Alto	1
Appanoose	1	Hamilton	1	Pocahontas	1
Black Hawk	7	Hardin	2	Polk	38
Boone	1	Henry	1	Pottawattamie	4
Bremer	1	Jasper	4	Sac	7
Cedar	1	Johnson	5	Scott	3
Cerro Gordo	1	Keokuk	2	Shelby	2
Clay	1	Kossuth	1	Sioux	2
Clayton	1	Lee	9	Story	6
Clinton	6	Linn	8	Tama	1
Dallas	4	Louisa	1	Union	1
Davis	1	Mahaska	2	Wapello	7
Decatur	1	Marion	3	Washington	3
Des Moines	2	Marshall	8	Wayne	1
Dickinson	1	Mitchell	2	Webster	2
Dubuque	3	Monona	1	Winneshiek	1
Floyd	1	Monroe	1	Woodbury	5
Franklin	3	Muscatine	1	Wright	2
Greene	1	O'Brien	2	Total	
Grundy	1	Osceola	1	(Aug. 6, 1955)	184

New Cases First week in August				Total Through first week in August			
1952	1953	1954	1955	1952	1953	1954	1955
259	25	87	45	662	162	364	184

CASES BY MONTH

	1952	1953	1954	1955	
January	1	7	1	9	
February	3	5	9	5	
March	2	2	4	1	
April	4	4	7	9	
May	6	14	6	16	
June	47	21	26	13	
July	340	59	225	86	
August	1260	248	337	45	(1st week Aug.)
September	1034	123	457		
October	664	69	270		
November	168	39	80		
December	35	22	23		
Totals	3564	613	1445	184	(as of Aug. 6)

MORBIDITY REPORT

Diseases	*July 1955*	*June 1955*	*July 1954*	*Most cases reported from these counties:*
Diphtheria	0	0	1	.....
Scarlet Fever	27	25	15	Polk, Buena Vista
Typhoid Fever	4	2	1	Clay, Story, Tama, Wapello
Smallpox	0	0	0	.....
Measles	572	467	842	Boone, Buena Vista, Polk, Scott
Whooping Cough	59	69	49	Des Moines, Scott
Brucellosis	27	21	30	Jasper 2; others scattered 1 to a county
Chickenpox	98	142	113	Dubuque, Polk, Scott
Meningococcus Meng.	1	0	3	Scott
Mumps	205	250	236	Boone, Dubuque, Linn, Polk
Poliomyelitis	86	13	223	Lee, Polk; 17 paralytic, 61 nonparalytic, 8 unspecified
Infectious Hepatitis	37	48	296	Adams, Plymouth, Polk
Rabies in Animals	18	17	19	Buchanan 2, Chickasaw 2, Sac 3; others 1 to a county
Tuberculosis	44	34	60	For the state
Syphilis	119	76	139	For the state
Gonorrhea	71	41	89	For the state

NEW STATE BOARD OF HEALTH



New State Board of Health members held an organizational meeting at the State Office Building, Des Moines, on July 12. They are (from left to right) Dr. Albert L. Yocum, Chariton; Dr. Samuel Leinbach, Belmond; Dr. Charlotte Fisk, Des Moines (who was elected secretary); Dr. Franklin H. Top, Iowa City (chairman); Dr. Donald C. Conzett, Dubuque; and Dr. Edmund Z. Zimmerer (who, as Commissioner, is one of six state officials who serve as *ex officio* members of the Board). The Board acts in an advisory capacity to the State Department of Health.

THE DOCTOR'S BUSINESS



Your Income Tax

MILLARD K. MILLS

WATERLOO

One of the most painful detours on your road to financial success is your income tax. Since anywhere from 25 to 50 per cent or more of your cash receipts may be paid out in the form of income tax, you will be wise to pay close attention to this expense.

You are not without control of your income tax. Adequate records to reveal and substantiate all possible deductions, and expert counsel to help you recognize those deductions may save you a great deal of money . . . and worry!

The items most frequently questioned on a doctor's tax return are conventions, organizational dues, business promotion, car expenses and depreciation. Let's consider them one by one.

CONVENTIONS

When you attend a convention, keep your hotel receipts and a record of expenditures for travel and meals. File these together, identifying the convention, the date and the place (you will be expected to have higher expenses in a large city than in a small one). And remember, you *can't* take your wife with you at Uncle Sam's expense!

You may belong to a medical study club and deduct the fee as a legitimate business expense. The cost of attending postgraduate courses, however, is presently a controversial item. Through court decision, the Bureau of Internal Revenue has been defeated in disallowing this cost, but it still maintains rather weakly that it is not deductible.

If such a course merely enables a doctor to maintain his status and ability, and does not equip him for a specialty, it is deductible according to the reasoning of the tax court. If this deduction is taken, however, it should be with the knowledge that it could be disallowed if the Bureau maintains its present stand.

DUES AND ENTERTAINMENT

Your specialty plays a part in the type of organization in which you are permitted a membership for business purposes. You may, of course, claim your national, state and county medical society dues, and, in addition, those for specialty societies to which you belong. And because expenses for memberships in your town's Chamber of Commerce and Better Business Bureau are likewise deductible, it is apparent that the Bureau feels that you have a civic duty to belong to the former and that the latter is necessary to your practice. But other club dues, technically, are not allowable, although some agents will permit a specialist to deduct part of his country club or social club dues if he can prove that the memberships are *necessary* to him in obtaining referrals.

Keep a list of the doctors or others whom you entertain, together with the place and cost of the dinner. (Incidentally, don't include yourself. The Bureau will not play host to you.) Then be sure you can go to your files and prove that you have received referrals from those persons or that they have helped you in a very concrete way. If you can do that, most agents will allow those deductions which appear to be "ordinary and necessary." A specialist will be permitted to entertain more than will a general practitioner whose practice does not depend upon referrals.

CAR AND DEPRECIATION

A doctor is generally allowed one car for business and one for personal use. If this is your situation, you have no problem. Simply keep the expense records separate. If you have only one car, you will have to determine what percentage of the expenses are business, and then apply that percentage to the total expenses before claiming the deduction. In rare instances, a doctor may be allowed to claim one and one-half cars for business purposes, but if you wish to make such a claim, be sure you can prove the need for such an arrangement.

Be prepared to record and prove all expenses. Then let your tax consultant tell you what to claim. The combination of wisdom in your claims and proof in your records will assure you that your income tax is kept to a minimum!

Mr. Mills is general manager of Professional Management.

MENTAL ILLNESS

THE CHILD WITH NON-FOCAL BRAIN DAMAGE

Classrooms and homes are often kept in turmoil by the erratic behavior of the child with unsuspected and subtle brain injury. The child does not limp, he is not spastic, nor does he have convulsions, yet his behavior is very disturbing to those around him. Three main features are likely to characterize him: (1) hyperkinesis; (2) short attention span; and (3) unpredictable moods.

This clinical triad is especially likely to occur in children who suffered asphyxia neonatorum or pertussis before three years.[1] However, it also appears in children, who for a multitude of reasons may have suffered diffusely scattered microscopic injury to the brain as a result of brain anoxia, hypoglycemia, encephalitis, etc.

Effective treatment depends on diagnosis. This in turn depends upon a careful history, physical examination, and often special tests such as the electroencephalogram and psychological tests. Written or oral reports of classroom behavior from the teacher may be very valuable. There are no absolute diagnostic features. Rather, the physician must rely on a composite of a number of suggestive features in the history and on his own observations.

Along with the above mentioned clinical triad are a number of additional characteristics helpful in suggesting the diagnosis. There may be minor yet visible motility disturbances, such as a slightly propulsive gait, awkwardness, poor associated motor movements, transient eso- or exophorias, tics, twitching, jerkiness, much myoclonus in sleep, and immature postural reflexes.[2] The child may be unusually reckless, callous to pain, or brash in social situations.

Very often, punishment does no good or makes the child's behavior worse. As a toddler it was likely that he could not enjoy a bedtime story and did not cuddle for affection; he does not become glued to television; arithmetic may be his hardest subject; his behavior at play may be unusually repetitive; stereotypes in his speech may persist unduly long; group stimulation makes him "wild" sooner than most of his peers; emotional expressiveness is often unusual—e.g., laughter too loud, long or "silly"; "intelligence" as measured by the standardized "I.Q." tests may or may not be lowered—but the patterns of performance as exemplified by figure-ground perceptional distortions, perseverations, specific immaturities of motor or graphic performance are often highly indicative of brain injuries.

The hyperactive, moody, distractible child, whose frustration tolerance is limited and whose brain damage results in learning disabilities, may be labeled as incorrigible by parent, teacher or court. Punishment—aggressive behavior—more punishment—increased aggressiveness—a vicious circle becomes established until the child is deeply estranged from people and they from him. Actually, there are many influence technics available for changing his behavior, once his special needs and limitations have been discovered.

Treatment depends on diagnosis, and consists of interpretive and supportive interviews with the parents, and environmental manipulation, often accompanied by medication, for the child. We* have found that relatively large doses of dexedrine[3] may be very helpful in subduing this type of brain-injured child, improving and stabilizing his mood, and extending his attention span. The dose ranges from 0.3 to 1.0 mg. per kilogram of body weight, and it is divided, one half being given after breakfast and the remainder after lunch. We have not given more than 50 mg. per day. Good effects have been more frequent since we began giving larger doses. Some anorexia occurs, and with higher doses, some wakefulness. The latter side effect can be minimized by reducing the noon dose and sometimes by adding a sedative at the hour of sleep. Over a course of weeks, the anorexia improves with continued medication. The drug can be safely tried along with or before one attempts a more comprehensive approach.[4] Continued reliance on the drug alone is inadvisable.

REFERENCES

1. Rosenfeld, G. B., and Bradley, C.: Childhood behavior sequelae of asphyxia in infancy. Pediatrics, 2:74-83, (July) 1948.
2. Silver, A. A.: Postural and righting responses in children. J. Pediat., 41:493-498, (Oct.) 1952.
3. Bradley, C.: Benzedrine and dexedrine in the treatment of children's behavior disorders. Pediatrics, 5:24-36, (Jan.) 1950.
4. Strauss, A. A., and Lehtinen, L. E.: Psychopathology and Education of the Brain Injured Child. New York, Grune & Stratton, 1948.

STOMACH ULCERS IN CHILDREN

Children have stomach ulcers and other internal disorders caused by emotional factors just as adults do, according to A. H. Chapman, M.D., and Dorothy G. Loeb, M.A., of Children's Mercy Hospital, Kansas City, Missouri. Bottled-up emotions, they have declared in the June issue of the AMERICAN JOURNAL OF DISEASES OF CHILDREN, are sometimes responsible for peptic ulcer, ulcerative colitis, stomach cramps, "knots" in the stomach and a variety of other ailments in youngsters. About ten per cent of all adult ulcerative colitis, they go on to say, has had its beginnings in childhood. As regards basic cause, the authors point to emotional insecurity.

* The author is a member of the psychiatric staff at University Hospitals, Iowa City.

WOMAN'S AUXILIARY NEWS

Mrs. Edw. B. Hoeven, *Woman's Editor*
224 East AltaVista, Ottumwa

Mrs. Wilson Wolfe, *Asst. Woman's Editor*
N.E. Elm Street, Ottumwa

LINES FROM THE PRESIDENT

Working without a goal is drudgery. A goal without working is a dream. Working toward a goal is progress! —*Martin Vanbee*

Summer flowers are now gone, and the first days of autumn are with us again. Autumn, with its kaleidoscope of colors and cool days soon will help us forget the hot, humid days of summer. Many of you will be reliving the experiences of your first days of school with your children; others will be sending a son or a daughter to college. We shall all be astonished at how full the house is with quietness. Our energies and enthusiasm for activities will seek new outlets.

Let us devote a fair and adequate part of our time this year to the Auxiliary, an organization to which we owe our first allegiance. A good Auxiliary on state and county levels doesn't "just happen." It is the result of yours of diligent and faithful service, not just of one or two women, but of the composite of the entire membership. Those of us who try to accomplish something and fail are infinitely more remembered than are those of us who seek to do nothing and succeed.

Our program plans this year will be closely allied with the national theme: "Active Leadership in Community Service." I want our state Auxiliary theme to continue as "Partners in Medicine." Mr. Ernest Howard, in an article published in the national BULLETIN of March, 1952, said: "This brings to me my vision of the Auxiliary of tomorrow. Since its establishment in 1922, the Auxiliary has evolved from essentially a social group into a public service organization. In my opinion this is entirely as it should be. Physicians, after all, are dedicated as a profession to serving mankind. Isn't it fitting that their wives should be their partners in public service as well as in all other aspects of life?

"It is my hope that every Auxiliary will become increasingly active in improving the health of its community. Wherever the need may lie, whether it be in an improved school health program, a new hospital, or the recruitment of girls in local nursing schools, the Auxiliary and the medical society should take the lead. You note that I say 'the Auxiliary *and* the local medical society.' It is very important that you work as a *team*. Two heads are better than one, and very often such consultation with the medical society stimulates the medical society to adopt a more active public service program itself. I challenge you, as Auxiliary members, to do all you can to better America's already outstanding health record, to the end that your children and mine not only will be healthy, but will also be free."

Let us accept this challenge and earn the right to call ourselves "Auxiliary to the medical profession"—*Auxiliary* meaning "that which confers aid or help."

I solicit your cooperation as individual members and offer you suggestions for active participation in our state projects:

1. Make a personal call on new doctors and their wives in your community. Welcome them with sincerity to your medical group.

2. Plan a fall district meeting with other counties in your district. Consult the district councilor. She is anxious to help you. Invite the State Medical Society councilor of your district. I should like to have all-day district meetings, with a program in the morning and with the afternoon devoted to an informal discussion and briefing session for county officers. Send me whatever suggestions you may have.

3. Send money to our Nurse Recruitment and Loan Fund. If we don't secure more donations from you, our Fund will soon be depleted, for very many girls are seeking help. We have four new girls this fall who are accepting our assistance. Send more than fifty cents per member if you can, but send at least that minimum. We cannot let this project fail through lack of support! Be hostesses to your Future Nurses Club at a tea and program during National Nurse Week.

4. Make out a TODAY'S HEALTH gift subscription list for Christmas. Each individual member should give one gift subscription. There is invaluable health information in this magazine for just $1.50. A copy of TODAY'S HEALTH on the reception room table in your husband's office is a MUST! More and more lay people are reading the magazine, and if they don't see it when they come to consult him, they may wonder why your husband doesn't subscribe to this American Medical Association publication. Insist upon it for him. You have more influence on him than any other person or group. It is your responsibility to make our projects successful.

5. Support the American Medical Education

Foundation. Encourage your friends and neighbors to send memorial gifts. Have food sales, bridge benefits, hobby shows and other money-raising projects to help AMEF. If we don't assume the responsibility of educating young men in medicine, the government will, and if medical schools deteriorate, so will the health standards of our country.

6. Have a program on mental health for your self-education. Encourage volunteer services at the Mental Health Institutes. Make a tour of one of these Iowa institutions to see what is being done for the mentally ill.

7. Devote one meeting of your county Auxiliary to a discussion of each of our Auxiliary projects, and decide upon those in which you wish to participate actively.

8. Show films on health projects in civil defense. They are available from the AMA office in Chicago.

9. Check with your county Red Cross chapter to see what is being done locally for civil defense. If your chapter is not active, offer it your help, and encourage the development of an active civil defense program.

10. Have social as well as instructive meetings.

11. Appoint your delegates for the Auxiliary's 1956 annual meeting.

12. Subscribe to the national BULLETIN. You can't invest $1.00 to better advantage.

13. Remember Safe-Driving Day.

14. Honor the doctors of your county on Doctor's Day, March 30.

Mrs. Merillat and her committee have prepared the Year Book to be used as your guide for the year's program. Keep it within easy reach at all times, and use it. Reprints of the Woman's Auxiliary membership list are available for twenty-five cents from the State Medical Society's office. For any information or help, write to your president, or to your administrative secretary, Mrs. Hazel Lammey, 529-36th Street, Des Moines 12.

Congratulations and welcome to our new Auxiliary in Mahaska County, and to the reactivated chapter in Winneshiek County. Also to the new Auxiliaries organized last spring: Wright County, O'Brien County and Palo Alto County. We hope the tentative organization in Cerro Gordo will soon be permanent and that Scott County will seek the association of our state Auxiliary and affiliate with us this fall. We are very pleased to welcome you and hope you will derive much from the friendships formed and from the pleasures of working together in a good cause.

Mrs. Charles H. Flynn
President.

TODAY'S HEALTH

This past year, the national Auxiliary reached the highest total of subscriptions in the history of the TODAY'S HEALTH project, with a whopping big 53,214! Iowa had a share in that victory. With a quota of 889, our state piled up 901 credits, for a percentage of 101. The 17 Iowa counties which made more than 100 per cent are as follows:

County	*Quota*	*Credits*	*Per cent*
Sioux	11	67	609
Delaware	9	36	400
Wright	12	40	333
Shelby	7	20	286
Cass	12	33	275
Dallas-Guthrie	23	52	224
Cerro Gordo	5	11	220
Worth	4	7	175
Boone	13	20	154
Van Buren	4	6	150
Montgomery	14	20	143
Dubuque	43	57	133
Hamilton	11	14	127
Allamakee	6	7	117
Polk	181	194	107
Grundy	8	8	100
Madison	6	6	100

AMERICAN MEDICAL EDUCATION FOUNDATION

The Iowa chapter of the Woman's Auxiliary to the American Medical Association is in receipt of a letter from Hiram Jones, executive secretary of the American Medical Education Foundation, expressing appreciation for the outstanding support of the AMEF by the Iowa members during the 1954-1955 Auxiliary season.

During the recent annual convention held at Atlantic City, a check for $63,743.65 was presented to the Foundation by Mrs. George Turner, immediate past president of the national Auxiliary. With the income from state auxiliaries, the amount raised last year was $80,539.65.

Iowa accounted for $258.50 of the total. It should be said here that during each of the past two years, one Iowa county has turned in almost half of the total for the entire state.

LEGISLATION

In the current suit of hospitals vs. doctors, how many doctors' wives fully understand the issues involved? The medical profession needs well informed, dedicated spokesmen in this fight, for fundamental rights are threatened.

Hospital administrators are seeking to have an Iowa law regulating the practice of medicine set aside. They have said, in effect, that they—the hospital administrators—are more humane, more considerate in their charges to patients than doctors are. And in addition, they have stated frankly

that they are interested in the revenue which accrues to the hospitals through their sharing in the incomes of the pathologists and radiologists whom they hire—and whom they can fire.

If they are permitted to continue hiring doctors in a few branches of medicine, what is to prevent their hiring them in all branches—obstetrics, surgery, gynecology and so forth? More hired men would bring in more revenue to the hospitals.

Every doctor's wife should understand the issues, the points of law and the ethical considerations that are involved. If they do not, the doctors are remiss in their obligation so to inform them.

* * *

The Jenkins-Keogh Bill which is before Congress should be supported. It is designed to give physicians and others the same tax-deferment rights as corporation employees. The Bill would allow them to put a limited amount of their incomes into retirement plans, paying income tax on that money when they receive it as annuity payments.

* * *

Really to understand the importance of the Bricker Amendment, read TREATIES VERSUS THE CONSTITUTION, by Roger Lea MacBride!



NEWS AND VIEWS

"In its latest sally into the education alley, the Gallup Poll has decided that the average U. S. college graduate has a knowledge of geography unworthy of an eight year old. Of those questioned, about eight in ten could not locate Bulgaria, nearly seven flunked on Rumania, nearly six did not recognize Yugoslavia or Austria, half flubbed on Poland. One out of twelve not only missed these, but Spain, France and England as well."

—TIME, July 4, 1955.

Wonder if Dr. and Mrs. Wilson Wolfe, of Ottumwa, had read the above item when they planned their vacation. They, with their children Marcia and Channing, are taking an educational trip which will include important lessons in geography, government and early American history for the boy and girl. Monticello, Williamsburg, Stratford Hall, Wakefield, Mt. Vernon, Richmond, Fredericksburg, Washington, D.C., Jamestown, N. Y., and New York City are some of the places on their itinerary.

School bells soon will be ringing. Happy, excited, impulsive children will pour from their homes into the streets of cities and small towns. These thoughtless little children are the responsibility of every adult. Last year, 4,100 children under 15 years of age were killed in motor vehicle accidents. Auxiliary members should take a leading part in the safety campaign. Teach safety and avoid tragedy!

Trained baby sitters are GEMS—Good Emergency Mother Substitutes. More and more people are beginning to realize the danger in leaving small children in careless hands. Now we have a program for the training of baby sitters, with special emphasis on safety precautions necessary for the different age groups. Auxiliaries wishing to sponsor these training classes can obtain information through the state chairman of Safety, Mrs. Clare Trueblood, Indianola, or can write to Box 125, Martha Van Renesslaer Hall, Ithaca, New York, for child care booklets.

In 1954, U. S. medical schools graduated 6,861 physicians, setting a new record and raising the physician ratio to one doctor for every 730 people. This situation is expected to continue improving for several reasons. The total enrollment of medical students last year was the largest in history —28,227. Medical schools spent more than $75,000,000 remodeling and expanding their teaching facilities. And ten new four-year medical schools have been started or are being planned.

WAPELLO COUNTY

The Woman's Auxiliary to the Wapello County Medical Society held its annual picnic at the home of Dr. and Mrs. L. A. Taylor, 14 Rayner Drive, Ottumwa. Sixty-seven doctors, Auxiliary members and guests enjoyed the festivities and good food.

Prizes were given to the couple having the most children, to the individuals having birthdays, to the returned vacationers telling the biggest fish story and to the girl who had been married longest to a medical student. That last prize went to Mrs. Larry Coppic, who was married to Dr. Coppic two years before he entered medical school. There also was a prize given to the doctor who had traveled the greatest distance from his birthplace to practice medicine in Wapello County. That prize went to Dr. S. F. Singer, whose home was in Vienna, Austria.

Drs. Wm. Ireland, George Smiley, G. N. Snyder and their wives were newcomers welcomed by the group.

METAMUCIL® IN BOWEL MANAGEMENT

"Smoothage-Bulk" Restores Normal Peristalsis

The gentle distention of the bowel wall provided by Metamucil® is physiologically corrective in constipation management.

Normal peristaltic movements of the bowel depend on the consistency and quantity of the material within the lumen. In constipation, hypohydration accounts for the hard consistency and inadequate quantity of the fecal mass. With Metamucil, stool quality becomes soft and plastic, while stool quantity is increased to produce gentle distention, the natural stimulus to peristalsis.

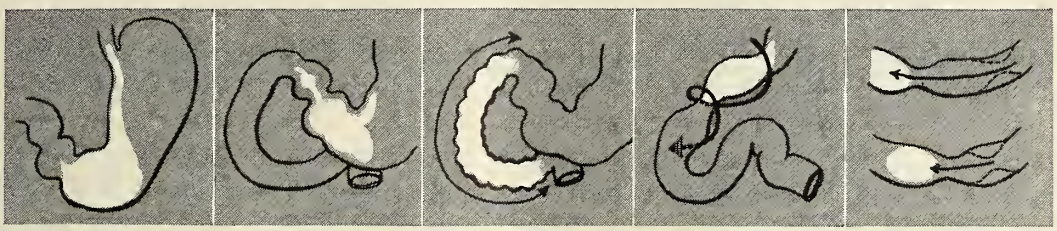
Metamucil is the highly refined mucilloid of the Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The usual adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice one to three times daily. An additional glass of liquid may be taken if indicated.

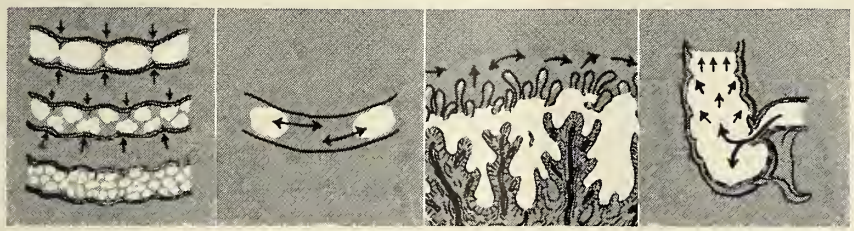
Metamucil is supplied in containers of 1, ½ and ¼ pound.

G. D. Searle & Co., Research in the Service of Medicine.

TYPES OF MOVEMENT WITHIN THE BOWEL



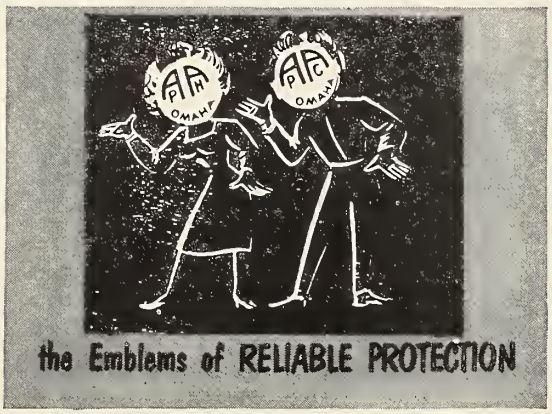
Food Breakdown | Pyloric Dilation | Duodenal Churning | Spiral Propulsion | Rapid: Slow Peristalsis



Kneading Action | Pendulous Movement | Villi Mixing | Ileocecal Dilation

SEARLE

WE CORDIALLY INVITE YOUR INQUIRY for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your eligible dependents.



SINCE 1902

ALL PREMIUMS COME FROM

PHYSICIANS SURGEONS DENTISTS

ALL BENEFITS GO TO

$4,500,000 ASSETS
$22,500,000 PAID FOR BENEFITS

PHYSICIANS CASUALTY AND HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

The Month in Washington

Washington, D. C.—Although very little health legislation actually was enacted in the first session of the 84th Congress, a number of important bills made enough progress to insure their getting serious consideration when the second session starts next January.

Foremost is a bill to amend the Social Security Act, and, among other things provide OASI payments for disabled workers after age 50. The present provision (enacted in 1954) protects a disabled worker's pension so it is not decreased because of his years of unemployment, but payments don't begin until he reaches 65.

The new plan, sponsored by Democratic members of the House Ways and Means Committee, was rolled through the House after closed committee hearings. But when it got to the Senate, Chairman Harry Byrd of the Finance Committee held it up, saying it was too important to be reported out without the complete hearings he plans for next session.

The American Medical Association is flatly opposed to cash disability insurance. One important reason is the Association's conviction that federal machinery necessary to regulate disability examinations inevitably would project the government into the medical care field. There are many other reasons, including the relationship between cash payments for disability and the patient's interest in rehabilitation. The issue of disability pensions will be settled next year in the Byrd Committee or on the Senate floor.

A bill for $90 million in grants for building and equipping non-federal research facilities passed the Senate and is awaiting action in the House Interstate and Foreign Commerce Committee. Hearings have been held on a bill for U. S. grants to medical schools and on another (Jenkins-Keogh) to allow self-employed persons to defer income tax payments on part of their income put into annuities.

Other bills that will be ready for action in January include legislation to stimulate nursing education, improve the medical care of military dependents, authorize health insurance for government workers, authorize U. S. guarantee of mortgages on health facilities, and offer military medical scholarships. The administration's bill for reinsuring health insurance plans by now is a little shopworn, but it still might be pushed again next year.

President Eisenhower has made it known he wants Congress to get to work on health legislation early next session. His urging might not be needed. Next year is a presidential election year, and both parties will exert themselves to enact,

and take credit for, new health programs that carry public appeal.

Despite the hundreds of hours of hearings in Senate and House, not a single important permanent medical program was set up by Congress in the last session. A national mental health survey, supported by the AMA, was enacted, but the administration's plan for mental health grants will be up for action next year.

Ignoring protests of physicians and dentists, Congress extended the doctor draft act for another two years, after first adopting two amendments. It exempted all men over 45, and all 35 or older who previously had been rejected for medical commissions for physical reasons alone.

For almost four months Congressional committees pondered what to do about Salk poliomyelitis vaccine. At first there were two main questions: 1. How much money should Congress spend to buy vaccine for free shots, and who should get them? 2. How far should the federal government move into the picture to insure equitable allocation?

One of the proposals—this even got through the Senate—was to offer unlimited money to the states, which in turn could give free shots to any persons or group of persons under age 20. President Eisenhower's idea—which he urged on Congress several times—was simply to insure that no person in need of the vaccine would go without it for financial reasons. Eventually his view prevailed and the states now are drawing on a $30 million fund. This law expires next February 15.

As weeks passed, there was less and less enthusiasm for setting up a federal allocation system, which Secretary Hobby and Surgeon General Scheele repeatedly told Congress wasn't needed. Consequently, when the National Foundation announced it had all the vaccine it needed for its program, a voluntary allocation plan was put in effect. The plan has the support and cooperation of physicians, pharmacists, drug manufacturers, and the state health officers. The Department of Health, Education, and Welfare is the liaison between the pharmaceutical houses and the states, dividing the vaccine on the basis of the number of unvaccinated persons in the eligible age groups.

RADIOLOGY FOR RADIOLOGISTS

Neuroradiology is to be the subject of the University of Minnesota's annual continuation course in radiology for radiologists, to be held at its Center for Continuation Study, on the Minneapolis Campus, November 7-12. The guest faculty will include Drs. D. L. McRae, of McGill University, E. H. Wood, Jr., of the University of North Carolina, and Professor Erik Lindgren, of Stockholm.

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

SHARP & DOHME
Philadelphia 1, Pa.
Division of Merck & Co., Inc.

REHABILITATION CONFERENCE AT CREIGHTON

Creighton University School of Medicine, together with the Nebraska State League for Nursing and the Nebraska Arthritis and Rheumatism Foundation, will sponsor a three-day Institute on Rehabilitation of Neuromuscular Diseases and Rheumatic Diseases at Creighton Memorial St. Joseph's Hospital on September 8, 9 and 10.

Guest speakers will be Joseph G. Benton, M.D., coordinator of education and research at the Institute of Physical Medicine and Rehabilitation, New York City; William A. Spencer, M.D., medical director of the Southwestern Poliomyelitis Respiratory Center and associate professor of pediatrics at Baylor University, Houston; and William B. Robinson, M.D., professor of medicine at the University of Michigan.

For further information, write to Harold N. Neu, M.D., medical director, Department of Rehabilitation, Creighton University, Omaha.

DIABETIC'S COOKBOOK

A new cookbook, containing 250 recipes for preparing beverages, pastries, desserts, fruits, meats, salads, sandwiches and vegetables, is being published by The Medical Arts Publishing Foundation, 1603 Oakdale Street, Houston 4. (Price: $6.50).

American Diabetic Association values and exchange lists are used throughout the book, and pages are included on which the diabetic can fill in his own diet prescription. Every recipe shows total amounts of carbohydrates, proteins and fats, as well as the caloric value of each serving.

The author, Mrs. Clarice B. Strachan, of Tulsa, Oklahoma, developed and proved the recipes over a period of 14 years during which she cooked for her diabetic son.

FOR PATIENTS ONLY!

An attractive new leaflet earmarked "for patients only" will be distributed in September to members of the AMA. Entitled "To All My Patients," this 12-page pamphlet explains the roles of various persons on the medical team in providing good medical care. In addition, it briefly discusses medical and hospital fees and health insurance. Space is provided for the doctor's name, address and office hours at the end of the booklet. Quantities will be available on request from the AMA Public Relations Department.



St. Joseph Sanitarium

Supervision Sisters of Mercy

P. O. Box 236
DUBUQUE, IOWA
or phone 3-8291 for information

Mild Mental and Nervous Cases
also
Convalescent and Rest Patients
Shock Therapy Hydrotherapy
Occupational Therapy
COMPETENT STAFF

PICKER X-RAY CORPORATION
of Iowa

DAVENPORT DES MOINES
SIOUX CITY WATERLOO
OMAHA

An Iowa Corporation
To Serve the Profession of Iowa
J. K. DUNN, *Vice President*

SALES
SERVICE
SUPPLIES
X-RAY
AND
ELECTROMEDICAL
EQUIPMENT

TOPICAL LOTION

'ALFLORONE'

ACETATE

(FLUDROCORTISONE ACETATE, MERCK)

Prompt improvement boosts the patient's morale

MAJOR ADVANTAGES: Economical, highly acceptable cosmetically, and effective in lower concentrations than hydrocortisone.



ALFLORONE Lotion appears to be even more effective than the ointment with the added advantage of greater patient acceptability. A recent study[1] confirmed that both product forms produce rapid relief of symptoms and involution of lesions in a significant percentage of cases of atopic dermatitis. Favorable response was also noted in contact dermatitis, anogenital pruritis, severe sunburn and intertrigo. For secondarily infected eczematous lesions, Topical Ointment of HYDRODERM affords combined anti-inflammatory and antibacterial action.

SUPPLIED: Topical Lotion ALFLORONE Acetate: 0.1% and 0.25%, in 15-cc. plastic squeeze bottles. Topical Ointment ALFLORONE Acetate: 0.1% and 0.25%, 5-Gm., 15-Gm. and 30-Gm. tubes. Topical Ointment HYDRODERM: 1% and 2.5% hydrocortisone with 3.5 mg. neomycin base and 1,000 units zinc bacitracin per gram, 5-Gm. tubes.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

REFERENCE: 1. Robinson, R. C. V., *J.A.M.A.* 157:1300, April 9, 1955.

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
223 Locust Street Telephone 2-6766
Des Moines 9, Iowa

The Neurological Hospital
2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for information
MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

PERSONALS

Dr. Karl Jauch, a 1954 graduate of the University of Illinois College of Medicine, has opened a general practice at La Porte City. He interned at St. Mary of Nazareth Hospital, Chicago.

At Perry, **Dr. Paul A. LaPorte,** a graduate of the College of Medicine at SUI who interned at Wheeling, West Virginia, has joined **Dr. A. M. Cochrane.**

Dr. J. Fred Roules opened an office for general practice at Mediapolis on August 15. A 1954 graduate of the SUI College of Medicine, he interned at Broadlawns Polk County Hospital, Des Moines.

Dr. Dale Harding has purchased the equipment and practice of **Dr. J. R. Christensen** at Eagle Grove. He graduated from the College of Medicine at SUI in 1954 and interned at Sacred Heart Hospital, Eugene, Oregon.

Another 1954 SUI College of Medicine graduate who interned at Eugene, Oregon, **Dr. Gregg M. Snyder,** has become associated with **Drs. D. G. Emanuel** and **E. W. Ebinger** at Ottumwa.

Following the completion of his internship at the Thomas D. Dee Memorial Hospital in Ogden, Utah, **Dr. Keith E. Miller** began practice at Agency late in July. Dr. Miller is a native of Ottumwa and graduated in medicine at SUI in 1954. Agency has been without a physician for several years.

Dr. C. W. Byrnes, of Dunlap, who has been a patient at St. Joseph's Hospital, Omaha, for several weeks has been transferred to the V-A Hospital there. He has a tuberculous infection of the lung.

The doctors at Ames have presented $529 to Mary Greeley Hospital there for the purchase of a flame photometer. The check represented the sum paid from the school health fund of the Ames Woman's Club for examining fourth, seventh and tenth grade students last spring. Last year, the doctors bought an air conditioning unit for the pediatrics wing of the Hospital.

Dr. Donald Todd has resumed practice at Guthrie Center following completion of his advanced study in surgery at Creighton University. **Dr. Edward T. Beitenmen,** a graduate of the medical school at Creighton, is practicing with him.

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.
4003 11th Street Place
Telephone 3-3804
Bert Davis, Rep.
Apt. 46B, Wakonda Village
Tel. 8-5540

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates—1955

SURGERY—Surgical Technic, Two Weeks, September 26, October 10
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, October 10
Surgical Anatomy & Clinical Surgery, Two Weeks, October 24
Surgery of Colon & Rectum, One Week, October 17
General Surgery, Two Weeks, October 3; One Week, October 17
Gallbladder Surgery, Ten Hours, October 24
Thoracic Surgery, One Week, October 3
Esophageal Surgery, One Week, October 10
Basic Principles in General Surgery, Two Weeks, September 26
Fractures & Traumatic Surgery, Two Weeks, October 17
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, November 28
Vaginal Approach to Pelvic Surgery, One Week, November 7
OBSTETRICS—General & Surgical Obstetrics, Two Weeks, November 7
MEDICINE—Two-Week Course, September 26
Electrocardiography, One Week, Advanced Course, September 19
Electrocardiography & Heart Disease, Two-Week Basic Course, October 10
Gastroscopy, Forty-Hour Basic Course, November 7
Dermatology, Two Weeks, October 17
RADIOLOGY—Clinical & Didactic Course, Two Weeks, October 3
Clinical Uses of Radioisotopes, Two Weeks, October 10
PEDIATRICS—Clinical Course, Two Weeks, by Appointment
Pediatric Cardiology, One Week, October 10 and 17
UROLOGY—Two-Week Course, October 10

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

In two articles posthumously published in the June, 1955, issue of the JOURNAL OF THE INTERNATIONAL COLLEGE OF SURGEONS, the late **Dr. Otis R. Wolfe,** of Marshalltown, described his "needle-hook" technic for the surgical treatment of cataracts in children and reported on the prevention of blindness in children from the development of an obstructive membrane over the iris.

Dr. Wolfe's papers were made a part of a special section on ophthalmology in the June issue, including several other papers and a memorial essay on Dr. Wolfe's work.

Medical Associates, of Dubuque, announce the affiliation of **Dr. Eugene V. Conklin** in the practice of pediatrics.

Dr. John Lesiak, who has been associated with **Dr. James Whitmire** at Sumner, took charge of the Buffalo Center Clinic on July 11, and was joined on August 1 by **Dr. James Barr,** who has been practicing at Elmore, Minnesota.

Dr. Carlton B. Lake, a 1954 graduate of the College of Medicine at SUI, is practicing with Dr. Whitmire, at Sumner, while awaiting his call into military service. He recently completed an internship at Hurley Hospital, Flint, Michigan.

A $5,000 grant from the Cereal Institute, Inc., has been accepted by the State University of Iowa for research in physiology and nutrition. It will be used by **W. W. Tuttle,** professor of physiology, and **Kate Daum,** professor and head of Nutrition, to complete investigation of physiologic and chemical changes that occur during weight loss.

Two $1,000 grants, one from the Human Nutrition Research branch of the United States Department of Agriculture for continuation and summation of studies being carried on in the Department of Orthopedics, and the other from the Iowa Heart Association for equipment to be used in heart surgery, and two grants totaling $1,350 from the Iowa Division of the American Cancer Society were accepted at the same time.

Dr. Dick Van Eldik has purchased the equipment of the late **Dr. William Doornink** and has begun practice at Orange City. Dr. Van Eldik is a graduate of the College of Medicine at SUI and has been in the Air Force for the past two years.

An office building for the use of **Dr. K. D. Rodabaugh** is being erected by the Tabor Fire Department. The firemen, themselves, have purchased the lot and will contribute the requisite labor.

Dr. Alton Knosp has begun practice in Paton following completion of his internship at Nebraska Methodist Hospital, Omaha. He is an Army veteran, having served in the infantry for 26 months.

Dr. Maurice Northup is now associated with **Dr. J. H. Coddington** in practice at Humboldt. A 1954 graduate of the College of Medicine at SUI, Dr. Northup interned at St. Joseph Hospital, Phoenix, Arizona.

Dr. E. F. Brown, a graduate of the State University of Iowa's medical school and a recent intern at Broadlawns Polk County Hospital, Des Moines, opened an office for general practice at Webster City on July 18. He served two years in the military immediately after finishing high school at Fort Dodge.

Dr. K. J. Kroack, of Buffalo Center, went to Denver on July 8 to study radiology at the University of Colorado school of medicine.

"If pigs were subject to hay fever, there wouldn't be any ragweed left in Iowa," **Dr. S. P. Leinbach,** of Belmond, declared during a panel discussion of agricultural health problems at the Kirkwood Hotel, Des Moines, on August 10. His comment followed a report from **Dr. Norman B. Nelson,** dean of the SUI College of Medicine, that "allergies are one of the most common causes why farmers quit farming."

Dr. Franklin H. Top, head of the new Agricultural Medicine Department at the University, said that increased mechanization is responsible for many farm accidents. "Machines are made in terms of efficiency in getting the job done," he declared, "and not in terms of what the machine does to the operator. When horses were used years ago, the farmer had to stop to rest his horses. Today, machines can go 24 hours a day, and farmers sometimes work seven days a week. So the farmer becomes tired and accident prone."

Aubrey D. Gates, AMA field director for rural health, reported at the same meeting that according to the USPHS, farming is the most hazardous occupation in the country today.

Dr. A. G. Felter, of Van Meter, said that the underlying factors in cornpicker accidents are fatigue and hunger. "Farmers should go back to the days of the hearty breakfast and frequent lunches," he declared.

Dr. J. W. Gauger, of Early, told about frequent backaches among farmers, and he attributed those difficulties to the fact that "in the spring they ride tractors 15 or 16 hours a day after a winter of much easier labor." And he pointed out that in many cases children 8, 9 and 10 years old, without the proper adult judgment and reflexes, are allowed to drive farm tractors.

Dean Nelson called attention to the fact that only one person in ten is immunized against tetanus in Iowa. During the Second World War, he pointed out, every military man was so protected, with the result that there were no more than four cases of tetanus. "It is a terribly painful disease which farmers are very apt to get," he concluded.

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

Home Medication . . .

The direction circular included in all packages of Bayer Aspirin has recently been published in full pages in leading national magazines reaching well over seventy-five million. Quoted below is a prominent paragraph from these directions.

IMPORTANT NOTICE!

The dosages of Bayer Aspirin recommended in these directions are appropriate for the aches and pains that may be treated by home medication. If these dosages do not bring relief and the pain persists, it is an indication that this particular pain is of a nature that requires the attention of a physician. Under these conditions, don't experiment with any other home medications. Consult your physician. He is the only one qualified to diagnose the cause of the persistent pain and prescribe the remedy best suited to your individual needs. This is particularly true of continuing severe pains of Arthritis, Rheumatism, Sciatica, Bursitis and Neuritis.

THE BAYER COMPANY DIVISION
OF STERLING DRUG INC.
1450 BROADWAY, NEW YORK 18, N. Y.

Dr. H. G. Feldick, of Buffalo Center, instead of going to Iowa City as originally planned, will enter into practice at Waterloo with **Dr. D. R. Acker.**

Dr. E. J. Boyd, until July 1 the chief pathologist at Mercy Hospital, Iowa City, has accepted appointment as resident physician in internal medicine at the V-A Hospital at Dearborn, Michigan. He has been at Mercy since 1952.

Dr. W. W. Kitson, of Atlantic, has announced that he plans shortly to retire. He was hospitalized recently for medical treatment at Council Bluffs.

Dr. John Ahrens, who practiced previously at New Hampton and at Waverly, has opened an office in Oelwein. He is a diplomate of the American Board of Surgery.

Dr. Gertrude V. Erickson is to serve as staff physician at the V-A Hospital in Knoxville. She comes from a similar institution at Palo Alto, California, and is a graduate of New York Medical College.

Dr. G. H. Scanlon, of Iowa City, suffered a compression fracture of his twelfth vertebra on July 24, when a horse that he was riding on his farm stepped into a hole and fell. Subsequently, Dr. Scanlon drove his car to Mercy Hospital, Iowa City, where the injury was identified by X-ray.

Dr. Charles Field, who for the past two years has served in the Army at Fort Riley, Kansas, reopened his practice at Cresco on July 18.

Dr. L. B. Amick, of Sac City, spent two days during July at Iowa Methodist Hospital, Des Moines, for observation. He had been experiencing back pains.

About 200 people attended a picnic at Marshalltown on July 24 in honor of **Dr. Grove W. Harris,** who was celebrating his seventy-third birthday and the fiftieth anniversary of his entry into medical practice. Dr. Harris is a Life Member of the Iowa State Medical Society.

Dr. E. J. Voigt, of Burlington, was hospitalized at St. Francis Hospital there on July 21.

Dr. R. E. Krause, of Ottumwa, a diplomate of the American Board of Anesthesiology, has announced that he will accept appointment to a post at a hospital in the New York City area. He has been at his present location since 1950, excepting for a period of duty with the Army.

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 'Hydeltra'

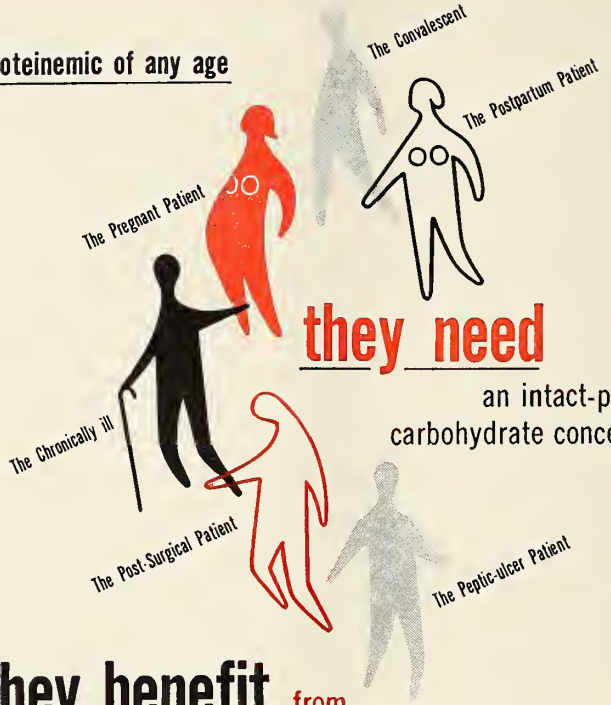
DELTRA® tablets
(Prednisone, Merck)
2.5 mg. - 5 mg. (scored)

the delta$_1$ analogue of cortisone

Indications:
Rheumatoid arthritis
Bronchial asthma
Inflammatory skin conditions

SHARP & DOHME
Philadelphia 1, Pa.
Division of Merck & Co., Inc.

The hypoproteinemic of any age



they need

an intact-protein, carbohydrate concentrate

they benefit from

Protinal*

NATIONAL

Micropulverized casein powder (61.25%), Carbohydrate (30%) to maintain protein/carbohydrate equilibrium essential for tissue regeneration.

COMPLETE PROTEIN

COMPLETELY PALATABLE

VIRTUALLY FAT AND SODIUM FREE (Less than 0.03% Na) (Less than 1.0% Fat)

The National Drug Company Philadelphia 44, Pa.

Available: Delicious in either vanilla or chocolate flavors, in bottles of 8 oz., 1 lb., 5 lb., and 25 lb. containers.

*VI-PROTINAL—Palatable whole protein-carbohydrate-vitamin-mineral mixture of high biological value

Dr. F. R. North, a Life Member of the Iowa State Medical Society who passed the fifty-first anniversary of his entry into medical practice on June 10, has moved his practice from Winfield to Morning Sun.

Dr. Maurice P. Margulies, a neurosurgeon, opened an office in the Marian Building, Council Bluffs, on July 27. He graduated in medicine at the University of Paris and served an internship at St. Vincent's Hospital, New York City. Before coming to Council Bluffs, he served two years in the neurosurgical service of the Valley Forge Army Hospital, being discharged with the rank of captain, and worked for a year at the Cherokee Mental Health Institute.

Dr. Winfield D. Edgerton, who was recently discharged from the Navy, has associated himself in practice with **Dr. Walter Balzer,** at Davenport. He studied medicine at Washington University, St. Louis, and interned at St. Luke's Hospital there. He served residencies in obstetrics and gynecology at hospitals in Chelsea and Boston, Massachusetts, and at Chicago.

Dr. O. N. Glesne, of Fort Dodge, announced on July 18 that **Dr. John F. Kelly** had joined him in general and surgical practice. Dr. Kelly, a Fort Dodge boy, is a 1954 graduate of the Creighton University school of medicine and interned at St. Catherine's Hospital, Omaha.

Dr. W. S. Markham, who came to Harlan in May to assist **Dr. R. E. Donlin** temporarily, has decided to make the association permanent. He is a 1945 graduate of the medical school at Creighton University, practiced for two years in his home town in Kansas, and has been a medical officer in the Marine Corps for eight years.

A former Mayo Clinic physician, **Dr. C. J. Ludwig,** has begun practice with his uncle, **Dr. J. L. Kestel,** in Waterloo. Dr. Ludwig is a diplomate of the American Board of Radiology.

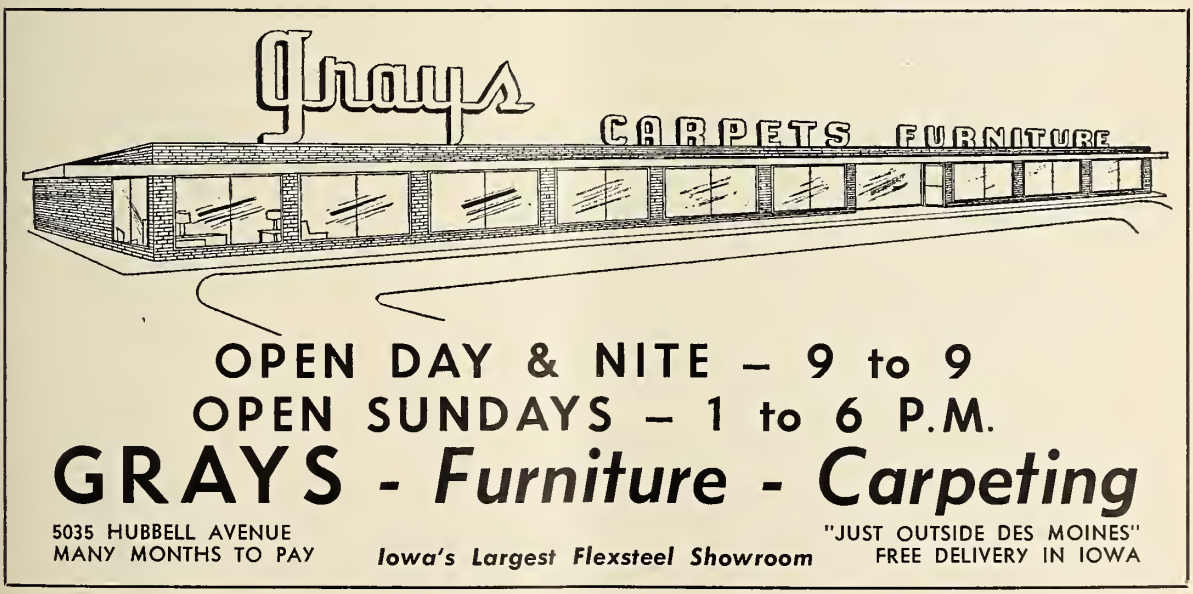
Dr. S. F. Hesse, an SUI graduate who interned at Los Angeles, opened an office in Hudson on August 1. He has purchased most of the equipment of **Dr. G. L. Robinson,** who has been a patient for some time at the V-A Hospital at Des Moines and does not intend to re-enter practice.

Dr. W. A. DeYoung resumed his practice at Glenwood on July 1, after a several months' bout with hepatitis.

On August 1, **Dr. Donald D. Schmitt,** a 1954 graduate of the College of Medicine at SUI, began practice in Kimballton. The town had been without a doctor for several years.

Dr. M. R. Dieckmann, a 1954 graduate of the College of Medicine at SUI who recently completed his internship in Middleton, Connecticut, joined **Dr. Edw. A Reedholm** in practice at Grundy Center on August 1.

Dr. Chris E. Schrock, of Iowa City, announced on August 2 that **Dr. George S. Anderson** is henceforth to be associated with him in the practice of internal medicine. Dr. Anderson has been a resident and a member of the house staff at the V-A Hospital in Iowa City.





in arthritis
and
allied disorders...

nonhormonal anti-arthritic

BUTAZOLIDIN®

(brand of phenylbutazone)

relieves pain • improves function • resolves inflammation

Employing the serum protein-polysaccharide ratio (PR) as an objective criterion of rheumatoid activity, it has again been shown that BUTAZOLIDIN "...produces more than a simple analgesic effect in rheumatoid arthritis."[1]

Clinically, the potency of BUTAZOLIDIN is reflected in the finding that 57.6 per cent of patients with rheumatoid arthritis respond to the extent of "remission" or "major improvement."[2]

Long-term study has now shown that the failure rate with BUTAZOLIDIN in rheumatoid arthritis, and particularly in rheumatoid spondylitis, is significantly lower than with hormonal therapy.[3]

(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., and Ishmael, W. K.: J. Lab. & Clin. Med. *45*:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chron. Dis. *1*:168, 1955. (3) Halbrook, W. P.: M. Clin. North America *39*:405, 1955.

BUTAZOLIDIN® (brand of phenylbutazone). Red coated tablets of 100 mg.

BUTAZOLIDIN *being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for literature before instituting therapy.*

GEIGY PHARMACEUTICALS Division of Geigy Chemical Corporation
220 Church Street, New York 13, N. Y.
In Canada: Geigy Pharmaceuticals, Montreal

51155

Geigy

Dr. Marvin J. Colbert, a specialist in internal medicine, has joined the staff of the Steele Memorial Clinic, at Belmond.

Dr. Keith E. Arnold, who has recently been in practice in Santa Cruz, California will be associated with **Dr. Melvin R. Kelberg** in the practice of obstetrics and gynecology at Sioux City on September 15.

While vacationing in Colorado, **Dr. Thomas A. Bond**, of Des Moines, fell from a horse and sustained a serious injury to his back. Not the least traumatic part of the injury was the 60-mile ride he afterwards had to take to the hospital at Durango, by Jeep.

Dr. Rubin H. Flocks, in his capacity as moderator of a clinical conference of the SUI Department of Urology, is the author of an article on the use of radioactive gold in the treatment of cancer of the prostate that has been published in the July issue of CA, the bimonthly magazine of the American Cancer Society. The investigation with which the article deals is in large part subsidized by that Society.

F. C. Coleman, M.D., pathologist at Mercy Hospital, Des Moines, and **George Huff, Ph.D.**, vice-president of Drake University, are to cooperate in developing an exploratory study, at Drake, in the applicability of fluorescin microscopy in a search for specific antigens in cancer tissue. The Iowa Division of the American Cancer Society has appropriated $2,092 for the support of the project, and day-to-day work on it will be under the direction of **Professor Paul A. Meglitsch.**

Commenting upon the grant, **Dr. S. F. Singer**, of Ottumwa, president of the Iowa Division, said that although in the past eight years $506,223 has been spent by the Cancer Society on research programs at SUI, at Iowa State College and by private Iowa investigators, this is the first time that a grant has been made for a research project at Drake University.

Dr. Kenneth J. Gee, of Shenandoah, has been elected a professional delegate of the Iowa Division of the American Cancer Society to the national organization for a term beginning September 1, 1955 and ending January 1, 1957.

Dr. Robert J. Meyer, a 1954 graduate of the College of Medicine at SUI who served his internship at White Cross Hospital, Columbus, Ohio, has associated himself in practice with **Drs. F. A. Wilke** and **W. C. Wildberger**, at Perry.



DEATHS

Dr. Eber Fortner Stevenson, 81, of Waterloo, a Life Member of the Iowa State Medical Society, died on July 11, following a heart attack. He had practiced at Waterloo since 1911, having been located at Webster City prior to that time.

Dr. Alexander A. Johnstone, 56, a Keokuk surgeon, died at his home on August 5 after a long illness.

Dr. William Edwin Lyon, 83, who practiced at Newton for 13 years and, previously, at Garden Grove for 20 years, died of arteriosclerosis at the V-A Hospital in Knoxville on July 29.

Dr. Isaac W. Leighton, 70, professor of anatomy at the State University of Iowa until his retirement in 1953, died at Mercy Hospital, Iowa City, on August 4.

Dr. William Franklin Hamilton, 72, who practiced at Marshalltown until 1943, died in Hollywood, California, on August 2.

Dr. William Alfonse Kauffman, 81, who practiced for 20 years at Conrad, died on July 29 at Evangelical Hospital, Marshalltown. He was a Life Member of the Iowa State Medical Society.

AMERICAN FRACTURE ASSOCIATION

The sixteenth annual meeting of the American Fracture Association is to be held at the Hotel Fontainebleau, Miami Beach, Florida, September 19-22, 1955. Many new and interesting approaches to some difficult fracture and orthopedic problems will be presented, and there will be papers and demonstrations having to do with skeletal pinning and external fixation.

For further information, address H. W. Wellmerling, M.D., secretary-general, 610 Griesheim Building, Bloomington, Illinois.

INTERSTATE POSTGRADUTE MEDICAL ASSN.

The fortieth annual scientific assembly of the Interstate Postgraduate Medical Association will take place in Milwaukee, November 14-17, 1955. More than 35 distinguished speakers have been engaged, and panel discussions have been scheduled on "Ulcers and Cancer of the Stomach," "Multiple Sclerosis," "Diverticulitis and Diverticulosis," and "Trauma."

Programs are being mailed to doctors in Iowa, but physicians who miss getting one or who wish further information are invited to write to the Association's headquarters, Gay Building, Madison, Wisconsin.

Relax the best way
... pause for Coke



Time out for refreshment





SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa

Thursday at 11:15 a.m.

"Medicine, U.S.A."

September 1 ..... Time to Think
September 8 ..... Looking Forward
September 15 ..... Love to Live
September 22 ..... Lucky Day
September 29 ..... To Free From Pain

WSUI—Iowa City, Iowa

Tuesday at 11:45 a.m.

"Heart of America"

September 6 ..... What's a Heart Murmur?
September 13 ..... Rheumatic Heart
September 20 ..... Congenital Heart Disease
September 27 ..... The Heart in Athletics

TELEVISION

WOI-TV—Ames, Iowa

Thursday at 8:30 p.m.

September 1 .... Overweight and Underweight
September 8 ..... Heart Disease
September 15 ..... Poliomyelitis Problems
September 22 ..... Heart
September 29 ..... Glaucoma

KCRG-TV—Cedar Rapids, Iowa

Tuesday at 6:30 p.m.

September 6 ..... Nursing
September 13 ..... Radiology
September 20 ..... Gerontology
September 27 ..... Varicose Veins

KGLO-TV—Mason City, Iowa

Thursday at 3:30 p.m.

September 1 ..... Mental Health
September 8 .. Diseases and Behavior Problems of Children
September 15 ..... Allergies
September 22 .. Problems of Expectant Mothers
September 29 ..... Eye, Ear, Nose and Throat Problems

KTIV-TV—Sioux City, Iowa

Sunday at 3:30 p.m.

September 4 ..... Cancer Detection
September 11 ..... Nursing
September 18 ..... Radiology
September 25 ..... Gerontology

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets
(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

SHARP & DOHME
Philadelphia 1, Pa.
Division of Merck & Co., Inc.

ESSAY CONTESTS

Prizes again have been offered for essays in dermatology, urology, and thyroid research. The American Dermatological Association is setting up prizes of $500, $400, $300, and $200 for reports of original work in dermatology and syphilology. Entries, typed in triplicate, must reach Dr. J. Lamar Calloway, Duke Hospital, Durham, North Carolina, no later than November 15. Papers not winning prizes remain the property of the respective authors and will be returned promptly.

The American Urological Association offers prizes of $500, $300 and $200 for essays on the results of clinical or laboratory research in its field. Competition is limited to urologists who have been graduated not more than ten years and to men in training. Essays must be sent to the executive secretary, Mr. W. P. Didusch, 1120 North Charles Street, Baltimore, before December 1.

The American Goiter Association again offers the Van Meter Prize Award of $300 for the best essay submitted concerning original work on problems related to the thyroid gland. Duplicate typewritten copies, double spaced, must reach Dr. John C. McClintock, 149½ Washington Avenue, Albany, not later than January 1, 1956. A place will be reserved on the program of the Association's annual meeting for presentation of the winning essay by the author, if he is able to attend.

CHLOROPHYLL NOT ALTOGETHER DISCREDITED

Now that the hysteria over the sometimes ridiculous use of crude cholorophyll in a rash of consumer products has subsided, a New York City physician, Dr. Lawrence D. Smith, points out that there remain some "legitimate, ethical, therapeutic uses of chlorophyll derivatives in medical practice."

A paper which he contributed to a recent issue of the NEW YORK STATE JOURNAL OF MEDICINE* is a comprehensive review of all the major work reported thus far in the professional literature and an attempt to suggest further research. "Twenty-five years of laboratory and clinical experience have proved consistently that certain water-soluble chlorophyll derivatives are effective in the treatment of acute and chronic suppurative disease, as well as in both infected and noninfected wounds and burns," Dr. Smith states.

* "The Present Status of Topical Chlorophyll Therapy," NEW YORK J. MED., 55:2041ff., 1955.

50 and eight years

Treating Alcohol and Drug Addiction



RALPH CLINIC

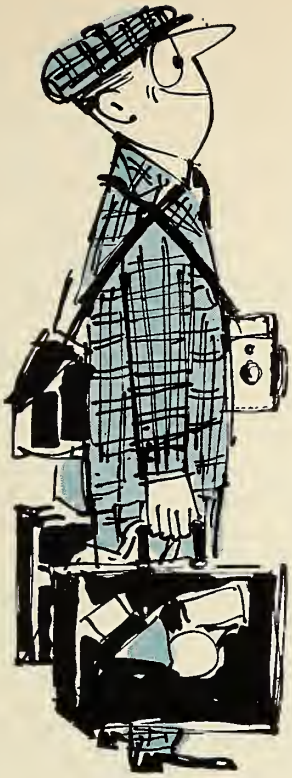
Formerly The Ralph Sanitarium

A Department of the Benjamin Burroughs Ralph Foundation for Medical Research

Ralph Emerson Duncan, M.D., Medical Director.

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone Victor 3624



A prescription for happy travel . . .



Practically all of your patients, young and old are motion sensitive and suffer to some degree when traveling by rail, bus, automobile, ship or plane. Bonamine easily and effectively prevents motion sickness. A single dose a day often is enough to insure the pleasure and therapeutic benefits of travel. The chewing-gum form has the advantages of patient acceptability, agreeable minty taste and ready availability without need for water for administration.

Bonamine is indicated also for the control of nausea, vomiting and vertigo associated with labyrinthine irritation due to Menière's disease, cerebral arteriosclerosis or radiation therapy.

*Trademark

Bonamine* HCl

Brand of meclizine hydrochloride

Supplied as Chewing Tablets, 25 mg. and also as scored, tasteless Tablets, 25 mg.

Pfizer

Pfizer Laboratories, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

PEDIATRICS FOR PEDIATRICIANS

The University of Minnesota will present a continuation course in pediatrics for pediatricians on September 21 and 22, under the auspices of its Center for Continuation Study. The course will be held in the Mayo Memorial Auditorium on the Minneapolis campus. One half day will be devoted to each of the following general subjects: infectious diseases, hypersensitivity diseases, central nervous system disorders, and endocrine and metabolic abnormalities.

The guest faculty will include Dr. Lewis Thomas, professor of pathology at New York University College of Medicine, New York City, and the course will be under the direction of Dr. J. A. Anderson, head of the U. of M. Department of Pediatrics. Registrants will also be invited to attend the meeting of the Northwest Pediatric Society, on Friday, September 23.

CIBA PLANS MEDICAL T-V SERIES

Ciba's new "Medical Horizons" show, a half-hour weekly T-V series to be presented, in cooperation with the AMA, over the American Broadcasting Company's network, will be premiered at 7:30 p.m. CST on Monday September 12. This documentary series will promote the American way of medical life by presenting specific accomplishments in the field of medicine as exemplified by the teamwork of modern medical research, education and practice. Live telecasts from medical institutions and research centers throughout the country will be featured.

The first of six shows in the 1955-1956 series of "March of Medicine" programs, presented by Smith, Kline and French Laboratories, will be telecast Tuesday, September 20, at 7:30 p.m. CST, over the National Broadcasting Company's stations.

COMING MEETINGS

(Continued from page 484)

Oct. 20-22	**Fractures and Joint Injuries.** U. of Colo. Med. Ctr., Denver
Oct. 20-Nov. 4	**American College of Surgeons,** annual meeting. Chicago
Oct. 22-26	**American Heart Assn.,** scientific session. New Orleans
Oct. 24	**Gallbladder Surgery,** 10 hrs. Cook Co. Grad. Sch. Med., Chicago
Oct. 24-26	**American College of Gastroenterology,** annual convention. Shoreland Hotel, Chicago
Oct. 24-27	**Annual Assembly of the Omaha-Midwest Clinical Society.** Hotel Paxton, Omaha
Oct. 24-28	**Recent Developments in Psychiatry for the Internist** (Amer. Coll. of Physicians Course). Topeka, Kansas
Oct. 24-Nov. 4	**Gastroenterology.** Cook County Grad. Sch. of Med., Chicago
Oct. 24-Nov. 4	**Surgical Anatomy & Clinical Surgery.** Cook County Grad. Sch. Med., Chicago
Oct. 26-27	**Annual Meeting of the Missouri Academy of General Practice.** Jefferson City
Oct. 26-27	**Gastroenterology.** Cleveland Clinic & Bunts Institute, Cleveland
Oct. 27-29	**Postgraduate Gastroenterology** (Am. Col. Gastroenterology). Chicago
Oct. 30	**AMA Medicolegal Symposium,** New York City

SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 **Capacity 200 beds**

Under the Supervision of the Sisters of Mercy

An Institution for the Study and Treatment of Nervous and Mental Disorders.

Conditioned Reflex and Antabuse Therapy for Alcoholism

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director
JAMES D. MAHONEY, M.D., Associate Director **RICHARD B. LEANDER, M.D.**

SHORT COURSE PLUS VACATION

Immediate registrations are being solicited for a short course March 5-14, 1956, at Fort Lauderdale, Florida, by Mediclinics of Minnesota, 516 Medical Arts Building, Minneapolis. The AAGP is authorizing 32 hours of postgraduate study credit for those of its members who attend. The tuition fee is $50.

On each of the eight days, there will be four hours of lectures and panel discussions on subjects having everyday application in general medical practice.

A special train is to carry doctors to and from the meeting.

EASTER CHICKS CARRY STOMACH INFECTION

An unusual outbreak of a stomach and intestinal infection is reported from Minnesota in the July 30 issue of J.A.M.A. In consequence, A. S. Anderson, M.D., Henry Bauer, Ph.D., and C. B. Nelson, M.D., of Minneapolis, warn that the distribution of chicks or other small poultry as household pets is hazardous.

Twelve cases of salmonellosis in 11 households in Hennepin County, Minnesota, were definitely traced to chicks which were distributed at Easter, 1954, by two food stores. No attempt was made to question all persons who received the chicks, but 17 other persons in the 11 households showed symptoms and probably had cases of salmonellosis. The patients ranged in age from four months to 35 years, six of them being under one year of age, and the symptoms included fever, watery diarrhea, blood in the stools, and vomiting.

EYE DEFECTS COMMON AMONG CEREBRAL PALSIED

Dr. Arnold S. Breakey has declared, in the June, 1955, issue of ARCHIVES OF OPHTHALMOLOGY, that all infants found to have evidence of cerebral palsy should be examined for eye defects, and vice versa. A study of 100 cerebral palsy patients that he reported from Lenox Hill Hospital revealed that 56 per cent had visual defects, and he expressed the opinion that those findings were "representative" of cerebral palsied children in general.

The most usual disorder was muscle imbalance. About 40 per cent of the group studied suffered turning in or out of the eyes. Lenses, surgery, exercise and other forms of treatment were used, and many of the children showed improvement. Total rehabilitation of the cerebral palsied patient, he contended, may hinge upon visual improvement.



ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of August 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland) Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(U.S. Naval Hosp., Memphis, Tenn.) ..Lt., U.S.N.R.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Bickford, R. H., Iowa City
(Lawton, Oklahoma) .....A.U.S.
Blaha, Vernon B., Marshalltown
(Great Lakes, Illinois) .....Lt. Comm., U.S.N.R.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
(Marine Corps Recruit Depot, San Diego,
Calif.) .....Lt.(j.g.), U.S.N.R.
Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Eckberg, R. A., Hubbard
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Brooke Army Med. Ctr., Ft. Sam Houston,
Texas) .....Capt., A.U.S.
Farrior, Richard T., Iowa City
(Tampa, Florida) .....
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Garred, W. P., Dow City
(San Francisco, Calif.) .....Lt.(j.g.), U.S.N.R.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Gottsch, Joseph C., Shenandoah
(Goose Bay, Labrador) .....1st. Lt., U.S.A.F.
Hach, Felix, Ankeny
(Ft. Sam Houston, Texas) .....Capt., A.U.S.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hodges, R. E., Iowa City
(Silver Spring, Maryland) .....Capt., A.U.S.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City
Grosse Isle, Michigan) .....N.A.S.

HILLCREST HOSPITAL

Operated by The Retreat Company

Des Moines 12, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
ADA DUNNER, M.D., Psychiatrist
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist
MARTIN J. KRAKAUER, Psychologist

SYDNEY L. MACMULLEN, President
HERBERT W. VETTER, Administrator

2801 Woodland Ave. **Phone 5-2121**

Upjohn

Ulcer protection that lasts all night:

Pamine*-Phenobarbital
BROMIDE

Tablets

Each FULL-STRENGTH tablet contains:
Phenobarbital ..... 15.0 mg. (¼ gr.)
Methscopolamine bromide ..... **2.5 mg.**

Dosage:
One tablet one-half hour before meals, and 1 to 2 tablets at bedtime.

Each HALF-STRENGTH tablet contains:
Phenobarbital ..... 8.0 mg. (⅛ gr.)
Methscopolamine bromide ..... 1.25 mg.

Dosage:
While the dosage and indications are the same as for the full-strength tablets, this tablet allows greater flexibility in regulating the individual dose, and may be employed in less severe gastrointestinal conditions.

Supplied:
Both strengths in bottles of 100 tablets; the full-strength tablets also available in bottles of 500.

Elixir

Each 5 cc. (approx. 1 tsp.) contains:
Phenobarbital ..... 8.0 mg. (⅛ gr.)
Methscopolamine bromide ..... 1.25 mg.
Alcohol 20%

Dosage:
1 to 2 teaspoonfuls three or four times daily, depending upon requirements in the individual patients.

Supplied: Pint bottles

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF METHSCOPOLAMINE

The Upjohn Company, Kalamazoo, Michigan

Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Ore.) ....Lt., U.S.N.R.
Koptik, George Jr., Garwin.....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Kuehnle, G. R., Dubuque
(Baton Rouge, La.) .....
Kurth, R. J., Waterloo
(Minneapolis, Minn.) .....Capt., U.S.A.F.
Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Lyman, Frank L., Jr., Fort Madison
(U.S. Naval Hosp., Beaufort, S. C.) ....Lt., U.S.N.R.
McCoy, John T., Cedar Falls
(U.S. Naval Hosp., Philadelphia, Penn.) Lt., U.S.N.R.
McFadden, F. Ross, Davenport
(Corpus Christi, Texas) ....Lt. Commander, U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Olson, Stewart O., Des Moines (Great Lakes Naval Training Station) .....
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Rodgers, G. H., Mt. Ayr
(Brooke Army Hosp., Ft. Sam Houston, Texas)
.....Lt. A.U.S.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Bethesda, Maryland) .....Lt., U.S.N.R.
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Shuldberg, Arthur, Des Moines
(Gunter AFB, Ala.) .....1st. Lt., U.S.A.F.
Sinton, D. W., Iowa City
(Denver, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Swanson, Eric M., Iowa City
(Omaha, Nebraska) .....
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(11th Field Hosp., APO 178, New York City)
.....Capt., A.U.S.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st Lt., U.S.A.F.
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven (Deep Sea Divers, Naval Gun Factory, Washington, D.C.) .....Lt., U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.

WE ARE PLEASED TO OFFER
TO THE DOCTORS OF IOWA

COURTESY
DISCOUNT
CARDS

Please Write or Phone 3-8049

We'll be happy to mail your card to your office or home.

Bernie's

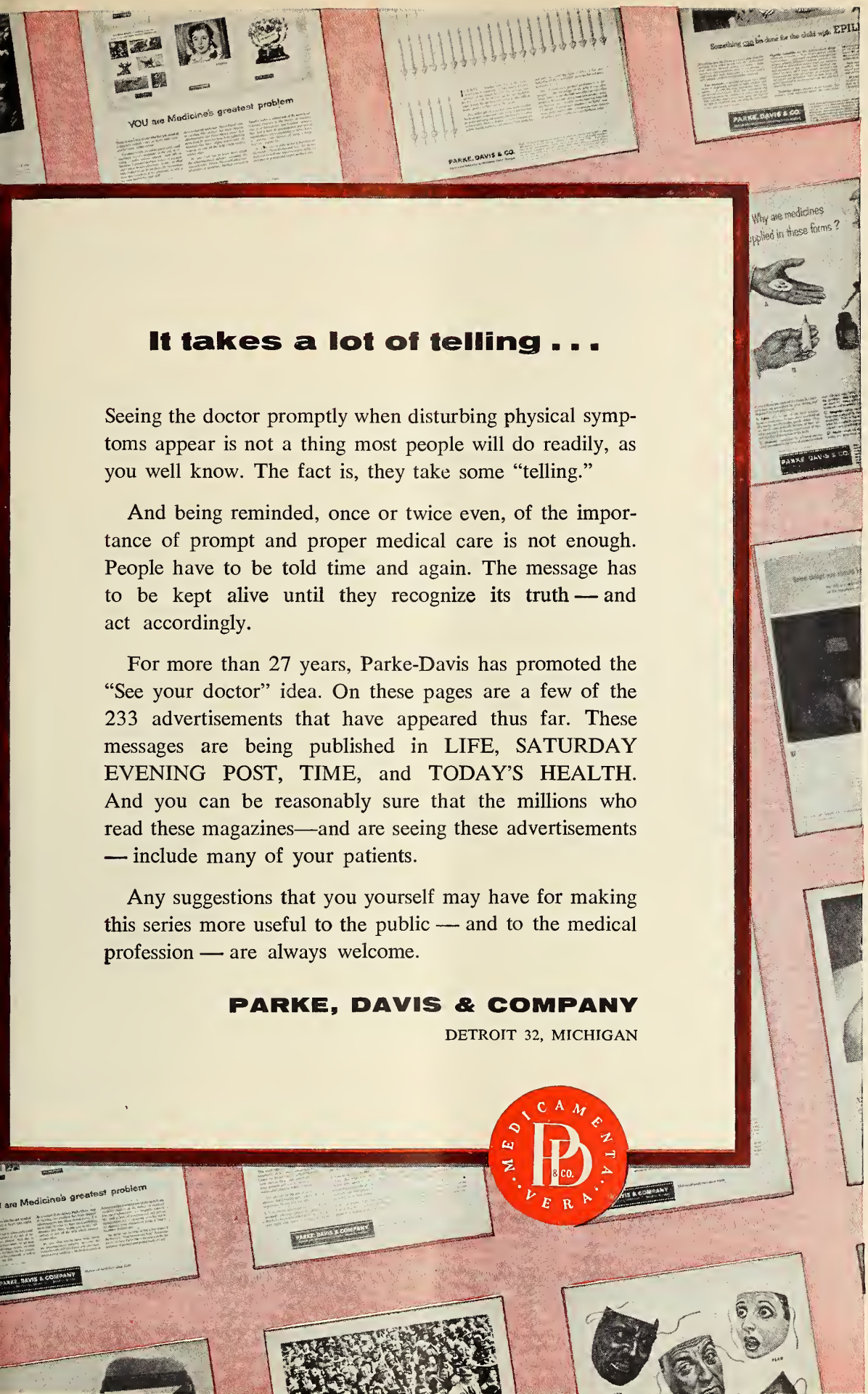
"IOWA'S BIGGEST LITTLE APPLIANCE STORE"

Nationally Known Air Conditioners,
Radios, T.V., Freezers, Refrigerators,
Vacuum Cleaners, Etc.

218 West 2nd Des Moines, Iowa

RADIUM & RADIUM D+E
(including Radium Applicators)
For All Medical Purposes
Est. 1919

Quincy X-Ray & Radium Laboratories
(Owned and Directed by a Physician-Radiologist)
HAROLD SWANBERG, B.S., M.D., Director
W. C. U. Bldg., Quincy, Illinois



It takes a lot of telling . . .

Seeing the doctor promptly when disturbing physical symptoms appear is not a thing most people will do readily, as you well know. The fact is, they take some "telling."

And being reminded, once or twice even, of the importance of prompt and proper medical care is not enough. People have to be told time and again. The message has to be kept alive until they recognize its truth — and act accordingly.

For more than 27 years, Parke-Davis has promoted the "See your doctor" idea. On these pages are a few of the 233 advertisements that have appeared thus far. These messages are being published in LIFE, SATURDAY EVENING POST, TIME, and TODAY'S HEALTH. And you can be reasonably sure that the millions who read these magazines—and are seeing these advertisements — include many of your patients.

Any suggestions that you yourself may have for making this series more useful to the public — and to the medical profession — are always welcome.

PARKE, DAVIS & COMPANY

DETROIT 32, MICHIGAN

MEDICAMENTA VERA · PD & CO.

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV OCTOBER, 1955 No. 10

CONTENTS

The Treatment of Adolescents
J. Roswell Gallagher, M.D., Boston, Massachusetts 505
Silent Cholelithiasis
O. C. Hardwig, M.D., Waverly, Iowa . . 508
Cholangiography in Surgery of the Biliary Tract
John A. Gius, M.D., and C. J. Johnson, M.D., Iowa City, Iowa 513
Congenital Anomalies of the Testes
Edward M. Honke, M.D., and Lawrence E. Pierson, M.D., Sioux City, Iowa . . 519
Acute Hemolytic Anemia in Infectious Mononucleosis
L. J. Kirkham, M.D., Mason City, Iowa . . 525

EDITORIALS

Buttonhole Your Senator! 533
Jenkins-Keough Clears a Hurdle 533
A History of a Threat 534
Iowa Lags in A.M.E.F. Contributions . . . 535

SPECIAL DEPARTMENTS

Coming Meetings 531
President's Page 539
The Journal Book Shelf 540
Mental Illness 541
County Societies 542
Deaths 542
The Doctor's Business 543
Iowa Academy of General Practice . . . 544
State Department of Health 546
Woman's Auxiliary News 548
County Medical Society Officers 552
The Month in Washington xxiii
Blue Cross-Blue Shield xxvi
Your Blue Shield President Reports . . . xxvii
Personals xxviii
Speakers' Bureau Schedules xxxviii
Roster of Iowa Physicians in Military Service . xliii

MISCELLANEOUS

Conference on Juvenile Problems 524
Kansas City Southwest Clinical Society . . 524
Program for Washington County Cardiac Farmers 530
Presidents' and Secretaries' Conference . . 535
Highlights of AMA Institute on P-R . . . 538
Omaha Mid-West Clinical Society . . . 544
AMA School Health Conference 545
Medicolegal Symposia at Omaha and Chicago 545
Gastroenterology for General Physicians . . 545
Why De-Emphasize Syphilis? 547
Psychiatric Lectures in Illinois 547
ISMS Begin New TV Series 551
Gynecology xxiv
Gerontology Institute at Iowa City . . . xxxvii
Ciba Starts Medical Newspaper xxxvii
Cults xli
Course on Fractures for GP's xliii

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
EDWARD W. HAMILTON, Ph.D., Asst. Editor..Des Moines

EDITORIAL BOARD

EUGENE J. BOYD, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

FRED STERNAGEL, M.D.....West Des Moines
GEORGE H. SCANLON, M.D.....Iowa City
ERNEST M. KERSTEN, M.D.....Fort Dodge
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



The Treatment of Adolescents

J. ROSWELL GALLAGHER, M.D.

BOSTON, MASSACHUSETTS

THE ADOLESCENT UNIT AT Children's Hospital, Boston, cares for *all* the ailments of young people—boys and girls—between the ages of 12 and 21. It is not a specialty clinic; it is a general practice clinic. General practitioners, internists and pediatricians all work there together, caring for young people who come to them for help with their lame backs, their cases of indigestion, their cramps, their sprains, their failures in school, their heart trouble or their inability to get along with people. As we try to treat each patient, we pay special attention to the task of discovering the sort of person he is, and we constantly keep in mind the characteristics common to the age group of which he is a member. The emphasis is on understanding and helping the *person,* rather than on treating just the symptom or the disease.

Now, what is the justification for housing and treating adolescent patients as a group apart? We believe that they should have a place of their own, just as children and adults have their own hospitals or divisions of hospitals, because they don't mix well with either of those other two groups. Each of them should have an opportunity to tell his own story, by himself, to his own doctor in a place where he can be led to feel he is taking responsibility for his own health. Furthermore, we are of the opinion that if we are to learn more about this age group and are to train physicians to take adequate care of adolescents, we must have a place where we can see sufficient numbers of them and can concentrate upon them and upon their problems.

This much will suggest the importance we attach to the fact that the patient between 12 and 21 is a *person,* not a problem. What he or she is like and what others of the same age group are like are questions of no less importance to the doctor than are the specific etiologies reflected by heart murmurs, cramps, stealing or soreness in the back. Each patient should be seen alone. He should have the doctor's undivided attention. He should feel that the doctor is interested in *him,* as well as in his problem. We feel that to be authoritarian, to be interested only in the youngster's ailment, or partially to ignore him and deal chiefly with his parents is not only to deal with him less than ideally but also to deprive him of the discovery that his doctor can also be his friend. An individual of this age group is still malleable, and we have an opportunity to help him become an adequate adult.

There are several characteristics of adolescents that we feel should always be kept in mind, regardless of the presenting problem or symptom. Adolescents *are* different. Being neither children nor adults, they can't be treated as if they were eight years old, or as if they were 30. They have needs and attitudes, they have interests, and they even have a few ailments that are peculiarly their own.

When one is dealing with an adolescent, there are five groups of matters that he must keep constantly in mind, regardless of the particular symptomatology or complaint. First is the patient's unyielding overconcern with his own personality. Second is his very real concern with his own growth and development. Third is his habit of strenuous living. Fourth is his concern with his progress in school. And fifth is his emotional development. Outstanding subdivisions of this last category are (a) his development of independence; (b) his assumption of adult male or female roles; (c) conflicts between his own behavior and that of his parents or of adults in general; and

Dr. Gallagher is chief of the Adolescent Unit of Children's Hospital, Boston. His division of that Hospital is aided by an appropriation from the Grant Foundation, Inc.

(d) his need for success and for acceptance by his own group.

OVERCONCERN WITH HIS OWN PERSONALITY

Adolescents are overconcerned with their own personalities, unyieldingly desirous to be themselves, preoccupied with developing their potentialities and on guard against being pushed around by people or ailments. Yet they are vacillating in their capacity to *be* themselves. In consequence, one cannot hope successfully to deal with them unless he pays close attention to them as people—to their emotional needs, to their individualities. One can *put* a brace on a little child, and one can tell an adult to go to get one for himself. But if, without inquiring into something more than the state of a sixteen-year-old's spine, one fastens a brace to his back, he can expect broken appointments, a twisted brace and a warped personality. The neglected adolescent will do something which will bring attention to more than his back. In short, he is more aware of himself than is a child, and less willing to sacrifice a part of himself than is an adult.

SENSITIVITY ABOUT GROWTH

Adolescents are very conscious about their growth and very sensitive about it. The small child or the 30-year-old adult cares little about his height or the state of his maturity, but the 14-year-old boy wants to know how tall he will be when his beard appears. Thus, it is imperative that one be very careful what comments he makes about his state of growth or maturity, that he refrain from comparing his attainments with that of his friend next door or with any, perhaps mythical, average. Few adolescents understand that growth is not orderly, that there is a wide variation among healthy, normal individuals as regards the time, extent and rate of growth, and that there is no one ideal size or state of maturity for any given age. It is helpful to give adolescents some tangible evidence of that fact. Too many of them have been overimpressed by charts and are too interested in being average. Too many fail to realize that what is average for the group may not be optimal for them. Both parents and adolescents need to learn that each of a variety of different states of growth and maturity is normal. Not only does one have to keep in mind this wide range of normality, but one also has to remember this age group's great capacity for change. Great changes in growth and development can and do occur, and the physician should be liberal in giving reassurance.

ADDICTION TO STRENUOUS LIVING

Another matter pertinent to the care of adolescents develops out of their habit of strenuous living. The adolescent doesn't just play around in a sandbox any more, and he hasn't reached the age at which he will be content to take it easy and be careful. He goes at things violently. He wants to win. So when we attempt to judge the fitness of his heart to run a mile, or his back to pole vault, or of his knees to ski, we need to keep this fact in mind. This is a sort of question that we can't answer after examining his heart while he sits at rest, or after examining his back as he lies on a table. These young people are asking whether they are fit for strenuous exertion, and even though they don't say so, we may be sure that when they leave us they are going to attempt something that is both violent and stressful. Thus, we must evaluate them in terms of the strenuous way in which they are accustomed to live and, indeed, *should* live. We should try to test them under conditions that simulate the sorts of stress to which they will subsequently subject themselves.

SCHOOL WORRIES

A third matter deserving special consideration in a physician's dealings with the adolescent age group is school. School is a source of worry. What courses to take, what type of school to attend, what career to get into, whether to go to college or not—all these questions come up and have to be taken into account. How these young people perform in school is a very important part of their medical history. Frequently their somatic complaints are related to their feelings about, and their performance in, their schoolwork. School may give them a pain, or it may be a source of real success and satisfaction.

The differential diagnosis of scholastic failure is, at times, complex, but it can be solved if approached in a painstaking fashion. It should always start with a medical history and a physical examination. Occasionally, failure in school is related to a previous illness, but resentment of authority, confusion over death or sex, a poor relationship to parents, worries over growth or social success, and limited ability or just plain lack of interest in academic things are more likely causes of failure.

There is one special factor in scholastic success which should be kept in mind. It is a condition sometimes called "specific language disability," which, in brief, is to say that there is more than just a lack of facility in saying, reading, writing and spelling words. When these young people are tested and their scores are put on a graph, it will be evident that though they are high in intelligence and mathematics, they are unbelievably poor in reading and in spelling. They don't just spell poorly; they spell in a bizarre, uncertain fashion. When a boy has little ability in using language (reading, spelling, etc.) and at the same time has a high intelligence, as is the case with many of these youngsters, he is doomed not only

to failure, but to frustration and its accompaniments as well. It is important that this condition should be recognized, for it can be helped.

EMOTIONAL DIFFICULTIES

Emotional difficulties in adolescence are very, very common, but they are only occasionally severe. Young people's disorders are less uniformly patterned than are those of adults, and they usually respond much more quickly to treatment, for most of them are very near the surface. Because adolescents who appear to be very ill can show a complete reversal in a short time, all estimates of the probable duration of their psychological disturbances are no more than just guesses. We need to remember that we are dealing with an age group in which change is an outstanding characteristic.

Religion, an upset home (it doesn't take a divorce to do it), death, a glimpse at the clay feet of their heroes, the behavior of adults in general, and sex occasion them great concern. They become disturbed in their efforts to become grown up and independent. They need success, friends and acceptance. They need strong, stable, warm adults to stand behind them, to act as models for them and to give them support, as distinguished from dominance. They need praise as much as they need censure.

Rebellion is so common, and what lies behind it is so important that all of us must remind ourselves at times that conformity and dependency, though less likely to disturb the peace, may at times be less really desirable. Lack of inclination to assert independence promises little but trouble for the rough days of adulthood which lie ahead. Because the adolescent has an imperative need to achieve independence, the importance of our fostering the gradual evolution of his behavior from the utter dependence of infancy toward the complete self-reliance and responsibility of adulthood cannot be overemphasized. As young people grow up, they should have increasing opportunities to become independent. They need these chances quite as much as they formerly needed constant protection and support. Continually to thwart their attempts at developing independence and to fail in offering them new experiences and new responsibilities will rob them of the abilities, confidence and resilience that they must have in the demanding and unpredictable adult world that they are about to enter.

THE ADOLESCENT UNIT'S PROGRAM

In trying to help young people with these problems, we at the Adolescent Unit of Children's Hospital attempt to make them realize that we are interested in them. We try to get them to understand themselves. We don't *tell* them; we *listen.* We get them to talk, to express in words what they have been expressing either in symptoms suggesting illness or in unacceptable behavior. When they lack some skill which would aid them in developing confidence and in becoming effective adults, we take care that they are offered an opportunity of attaining it. When their environment is unfavorable, we try to change it.

In order that we may elicit the information that we need, take cognizance of their characteristics and build the most helpful sort of physician-patient relationships, we treat these young people in a manner that is different from those used in treating both little children and adults. In a hospital or outpatient department, we try to give them a place that is exclusively their own. In office practice it is sometimes practical to set aside a special afternoon or evening for them. We see their parents first—and preferably on a previous day—so that the boy or girl is not kept waiting while the doctor and the parents talk. We see the boy or girl alone, so that he or she can talk freely and confidentially. We discuss our findings and our methods of handling the situation. We discuss school and interests and jobs and relationships, as well as matters which might appear to be more intimately connected with the presenting problem. Basically, we are trying to get to know the patient and to make him feel that we are as much interested in him as we are in his symptom. If we do this well, there is every likelihood that we shall be more successful in helping the ailment, and a good possibility that we may be of assistance in ameliorating some unrelated but perhaps more significant difficulty.

SUMMARY

These are some of the general principles of treatment and a few of the matters that we feel should be kept in mind and subjected to further study as physicians attempt to work with adolescents. Young people's personalities are precious to them. These boys and girls are beginning to become themselves, but few are sure enough of themselves to yield an inch. They are vitally interested in their growth. They need to be evaluated in terms of the strenuous way in which they live. School, which is so large and important a part of their lives, deserves consideration regardless of the nature of their current symptoms. Lastly, their desire to be treated as adults needs to be both recognized and fostered, and their rebellion, which appears when opportunities to become independent are consistently denied them, needs to be understood for what it is. If one will try to learn not only about their ailments but about their hopes, worries and doubts, adolescent patients will provide an outstanding opportunity for supplementing our training in thinking with training in being thoughtful.

REFERENCES

1. English, O. S., and Foster, C. J.: Fathers Are Parents, Too. New York, Putnam, 1951.
2. Gallagher, J. Roswell: Understanding Your Son's Adolescence. Boston, Little Brown, 1951.
3. Gallagher, J. R., and Brouha, L.: Physical fitness; its evaluation and significance. J.A.M.A., 125:834-838, (July 22) 1944.
4. DeLorme, Thomas L., and Watkins, Arthur L.: Progressive Resistance Exercise; Technical and Medical Application. New York, Appleton, 1951.
5. Gallagher, J. R.: Specific language disability; cause of scholastic failure. New England J. Med., 242:436-440, (Mar. 23) 1950.
6. Gallagher, J. R., and Gallagher, C. D.: Some comments on growth and development in adolescents. Yale J. Biol. & Med., 25:334-348, (Apr.) 1953.
7. Greulich, W. W., and Pyle, S. I.: Radiographic Atlas of Skeletal Development of the Hand and Wrist. . . . Palo Alto, California, Stanford University Press, 1950.

Silent Cholelithiasis

O. C. HARDWIG, M.D.

WAVERLY

THERE IS NO NEED FOR one's quoting profusely from medical literature to show that recommendations are diverse as regards treatment for silent cholelithiasis. A few samples will suffice. Lahey[1] long ago expressed the conviction "that there are no harmless gallstones," and it was his conclusion that because of the danger of acute cholecystitis and biliary obstruction, all gallstones should be removed. "The attitude," he said, "has been widely held that operation should not be undertaken until gallstones have produced symptoms. But if one deals with gallstone patients in large numbers, one cannot help being impressed with the fact that this philosophy results in many situations and in many fatalities which would not have occurred had the operation been undertaken earlier."

Cole[2] has said, "Considerable confusion exists as to the indications for cholecystectomy, particularly in patients with silent stones. After consideration of this point for years, I have concluded that any patient under 45 years of age with average life expectancy should have silent stones removed by cholecystectomy. The excuse for this decision lies in the probability that one or more of many complications such as hydrops, empyema, stone in the common duct, and pancreatitis will develop during the course of the rest of the patient's life."

Mayo and Lee[3] have said, "It is our belief that patients in whom silent gallstones are discovered at the time of laparotomy or by roentgenograms should be told that gallstones are present, and the possibility of further trouble should be discussed frankly with them. The mere presence of gallstones does not constitute an indication for cholecystectomy. Surgical treatment should be presented as an elective procedure for most patients with silent gallstones, but each situation demands individualization."

Those are three of the points of view: (1) that there are no harmless gallstones, (2) that in young patients silent stones should be removed by cholecystectomy, and (3) that surgical treatment should be presented to most patients as an elective procedure. The first of them is the one with which we are inclined to agree, for our limited experience with calculous biliary tract disease forces us to advocate surgical treatment for silent cholelithiasis whenever no definite contraindications exist.

There is a possibility that the statistics from large medical centers tend to misrepresent the course of silent cholelithiasis. It is our impression that many patients in the older age group develop symptoms or complications requiring surgical intervention, and we suspect that because the onset of their difficulties is frequently sudden and because elderly patients are usually reluctant to leave familiar surroundings, the surgery is often performed in hospitals near their homes.

This paper will review our surgical experience in treating biliary tract disease in a small rural hospital, will show the relatively large percentage of geriatric patients, and will point out some of the complications encountered in the aged.

MATERIAL

From 1945 to 1954, a total of 225 cases of calculous biliary tract disease were treated surgically by the staff of the Rohlf Memorial Clinic in a 50-bed hospital in a rural community of 5,000. The age of the youngest patient in the series was 19, the oldest 89. Of course this series is too small to be statistically significant, but it is reported in the hope that other doctors associated with small non-teaching hospitals will be encouraged to review and report their experience.

There were seven hospital deaths. Three of them occurred in cases of advanced, inoperable, primary carcinomas of the gallbladder, with metastasis and extension into the liver. There were four hospital deaths—a mortality rate of 1.7 per cent—from calculous biliary tract disease.

There were no deaths in the last 127 consecutive cases of non-malignant biliary tract surgery in this series.

DEATHS

Case No. 1 (#32981) A 49-year-old woman with a diagnosis of chronic cholecystitis with cholelithiasis and repeated gallbladder colic, healed varicose ulcer, postthrombophlebitic, of the right leg, had an uneventful cholecystectomy. On her thirteenth postoperative day, while ambulatory, she died of a massive pulmonary embolism.

Case No. 2 (#34912) A 63-year-old man with acute cholecystitis and cholelithiasis, who had had a cholecystectomy and choledochostomy with T-tube drainage because of a dilated common duct, died on the seventh postoperative day of an ascending cholangitis and hepatic insufficiency.

Case No. 3 (#35170) A 70-year-old woman, with a diagnosis of chronic cholecystitis and cholelithiasis with gallbladder colic, rheumatic heart disease with aortic insufficiency, cardiac hypertrophy and hypertension, had an uneventful cholecystectomy. On the twentieth postoperative day, while she was ambulatory preceding her discharge, she had a massive pulmonary embolism and expired immediately.

Case No. 4 (#36477) Upon a 65-year-old woman with a diagnosis of coronary artery disease, chronic cholecystitis with cholelithiasis and repeated episodes of gallbladder colic, a cholecystectomy was carried out uneventfully. But on the third postoperative day, she had a coronary thrombosis with myocardial infarction substantiated by electrocardiographic changes, and died seven hours later.

DISCUSSION

Of our 225 patients, 76 (33.3 per cent) were 60 years of age or older. Fifty (22.2 per cent) of the total were 65 years of age or more, and 30 of them (13.3 per cent) were 70 years of age or older.

It is interesting that of the 76 patients 60 years old or older, 19 (24.7 per cent) had acute cholecystitis with cholelithiasis, 19 (24.7 per cent) required choledochostomy, and 7 (9 per cent) had a primary carcinoma of the gallbladder. Only one of the cases of carcinoma, a white woman 68 years of age with a papillary adenocarcinoma of the gallbladder accidentally discovered after cholecystectomy for cholelithiasis, is living three years postoperatively. Eight (11 per cent) of the cases had an emergency cholecystotomy, performed, in several instances, under local anesthesia. Cholecystectomy, in our opinion, was contraindicated in those patients because of complicating diseases.

Glenn and Hays,[4] in a recent article, point out four unique aspects of biliary tract disease in aged patients: (1) the apparent increased incidence of acute cholecystitis; (2) a relatively high incidence of choledocholithiasis; (3) the possible absence of characteristic signs and symptoms in acute disease; and (4) an increased incidence of associated biliary tract neoplasia. Nothing could be added to their excellent discussion of these four unique aspects, but we should like to add a fifth. We have been impressed by the complicated situations in which previously silent cholelithiasis becomes a surgical emergency in the aged. A few illustrative cases will help to show what we mean.

Case No. 5. (#32839) A 78-year-old man gave the following history upon his admission to the hospital. He had not been feeling well for the past year, and had noted shortness of breath on exertion. He had needed two pillows to avoid shortness of breath at night. On the morning of his admission, he had gone down cellar and had carried up a small basket of ashes to scatter on his driveway. Shortly thereafter he was seized with severe pain in the retrosternal area radiating into both wrists, with shortness of breath, severe diaphoresis and pallor. A physician was called immediately, and two hypodermics of an unknown amount of morphine were given him before he had a measure of relief from his pain.

Examination at the time of his admission to the hospital revealed an apprehensive, elderly white man whose skin was moist and cold. His heart was enlarged to the left. There was a tendency to gallop rhythm, and a harsh systolic murmur over the precordium was transmitted into the axilla. Otherwise, his general examination was unremarkable. He remained acutely ill for ten days after his hospital admission. Serial electrocardiograms were consistent with the diagnosis of a large posterior myocardial infarction. Because of a leukocytosis of 20,100 and a tachycardia of 180 to 200 accompanied by some cyanosis, his family was given a grave prognosis. Though he improved gradually under medical management for the following two weeks, he developed symptoms and signs of myocardial failure, with dyspnea, weakness, rales at both lung bases, a right hydrothorax and some peripheral edema at the end of that period.

On his seventy-sixth hospital day, after his cardiac condition had been stabilized for a week, he developed severe epigastric pain, and there was rigidity and tenderness in the right upper quadrant. His oral temperature was normal, but his white blood count, which had been normal, showed a leukocytosis of 16,900, with a shift to the left in the leukocyte differential count. A diagnosis of acute cholecystitis was made. A flat, portable roentgenogram of the abdomen revealed evidence of cholelithiasis.

Because of the protracted and stormy hospital course that had followed his myocardial infarction, it was the opinion of the internist that the patient could not tolerate another extended acute illness, and immediate surgery was deemed advisable. Under 1 per cent procaine local anesthesia and through a small transverse incision, a large,

tense, acute gallbladder containing numerous faceted calculi was readily exposed. The gallbladder was opened, the large calculi and a small amount of debris were removed, and a cholecystostomy was performed.

His postoperative convalescence was marked by continued mild cardiac failure, but otherwise it was uneventful. He was discharged for further management at home on his fifty-first postoperative, or one hundred twenty-eighth hospital, day, with no drainage from the cholecystostomy site and the wound healed *per primam.*

Case No. 6 (#34256) An 83-year-old white man had been hospitalized 2½ years previously because of a cerebral hemorrhage resulting in a residual left hemiplegia. At that time, the diagnosis had been hypertensive vascular disease, cerebral hemorrhage, left hemiplegia, bronchial asthma and right inguinal hernia. Two days before his readmission to the hospital, he had developed vague right upper quadrant abdominal distress which he thought was due to pleurisy, and heat was applied without much relief. The pain became more severe and shifted to the right lower quadrant. There was no nausea, vomiting or chill. There was no history of food intolerance or of anything else suggestive of cholecystic disease. When the pain shifted to his right lower quadrant, he felt that his distress was due to inguinal hernia.

On examination at the time of this second admission, he was an acutely ill man with residual left hemiplegia, a harsh systolic apical murmur, and a blood pressure of 150/90. The abdomen was not rigid. There was well localized, exquisite tenderness in the right upper quadrant over a palpable, enlarged gallbladder. The oral temperature was normal, the heart rate was 96, and the white blood count was 23,300, with a marked shift to the left in the leukocyte differential count.

A diagnosis of acute cholecystitis with cholelithiasis was made. It was our impression that this patient would not tolerate conservative treatment, and immediate surgery was therefore advised.

Under combined procaine local and light gas anesthesia, a large edematous acute gallbladder containing one large stone was exposed through a small transverse incision. Trocar drainage of the gallbladder revealed purulent fluid. Partially crushing the large stone facilitated its removal. The gallbladder was treated by simple cholecystostomy. The patient's convalescence was slow but uneventful, and he was discharged on his twenty-eighth postoperative day with no drainage from the cholecystostomy site and the wound healed *per primam.*

Case No. 7 (#38889) A 77-year-old white man who had been under treatment for several years for coronary artery disease, anginal syndrome, hypertension and cardiac hypertrophy was admitted to the hospital after developing severe substernal pain, with radiation to both forearms, while driving his car. The episode had lasted for about 30 minutes and had been accompanied by severe perspiration. At the hospital, retrosternal pain, with radiation to the left forearm, persisted in spite of 100 mg. of Demerol. His clinical course and the progressive changes in serial electrocardiograms were consistent with the diagnosis of an anterior-septal infarction. Treatment consisted of anticoagulants and quinidine gluconate, 125 mg. intramuscularly every four hours, because of frequent premature beats. The quinidine was discontinued on the third hospital day when his heart rhythm became regular. On his tenth hospital day, after his cardiac condition had stabilized, he developed severe pain in the right upper quadrant of the abdomen, accompanied by nausea and vomiting. His temperature, which had been normal for four days, was 100.4°F., orally. His white blood count was 10,150, after having been 8,000 four days previously. There was no marked shift in his differential count.

There was exquisite tenderness in the area of the gallbladder. The following day he continued to complain of pain in the right upper quadrant, his fever persisted, and the gallbladder was palpable and exquisitely tender. He was observed for one more day in the hope that his acute symptoms would subside, but thereafter, because he was definitely icteric and because the gallbladder remained palpable, surgery was advised in spite of the recent myocardial infarction.

Under procaine local anesthesia, a gangrenous gallbladder containing several small calculi was treated by cholecystostomy. The patient stood the procedure well, and his convalescence was uneventful. On his fourteenth postoperative day, he was discharged from the hospital for further convalescence at home.

Case No. 8 (#39458) A 72-year-old white man, two years previously, had had a cerebral hemorrhage resulting in a left hemiplegia. Four days before his admission to the hospital, he had experienced sharp pain in the right upper quadrant after eating a meal of pork, cabbage and rutabagas. The pain was not colicky in nature and did not radiate. When the pain persisted the following day, his attending physician had been called. There was some nausea and vomiting, and when, on the evening before his admission, he had a severe chill followed by a temperature of 104°F, the doctor made a diagnosis of acute cholecystitis.

At the time of the patient's admission to the hospital, he was a well-preserved, elderly white man who did not appear acutely ill. He had a residual partial left hemiplegia, mild dehydration and slight distention of the abdomen. There was mild rigidity in the right upper quadrant, and a tense, tender gallbladder was palpable. There was no rebound tenderness. On admission, his oral

temperature was 99.4°F., and his pulse rate was 60. His white blood count was 16,050, with a definite shift to the left in the leukocyte differential count. Urinalysis revealed no urinary chloride. The sedimentation rate was rapid. He was given penicillin parenterally and was hydrated with subcutaneous Ringer lactate solution. During the night of his first hospital day he had another severe chill, his temperature rose to 105.2°F., and on the following morning he was acutely ill. The gallbladder was larger and very tender. He was given Ringer lactate solution subcutaneously in preparation for surgery.

Under 1 per cent procaine local anesthesia, a large, distended, acute gallbladder was visualized through a small right upper transverse incision, and was drained. Exploration of the gallbladder revealed no obvious gallstones. Necrotic mucosa was obtained, and since a good free flow of normal-appearing bile had been obtained, no further exploration was attempted. A simple cholecystostomy was performed. The patient made a smooth and uneventful convalescence and was discharged from the hospital on his fifteenth postoperative day.

After his discharge, he felt well for approximately four months. He then began to complain of vague abdominal distress after eating, but it was never severe or localized. His appetite had been good, but he "filled up" fast. Occasional distress at night was relieved by his drinking hot milk. He was seen on several occasions by his family physician, but there were no definite findings. On the morning of his second admission to the hospital, he developed sudden, severe, diffuse upper abdominal pain.

On examination after admission, the patient was in acute distress, his abdomen was distended and silent, and there was diffuse tenderness, most marked just to the right of the epigastrium. Rebound tenderness was marked. His admission temperature was 99.6°F., and his pulse rate was 64. The white blood count was 21,000, but there was no shift in either his differential count or Schilling index. The sedimentation rate was rapid. On a flat film of the abdomen, the large bowel appeared distended, but the pattern was not indicative of intestinal obstruction. No calculi were visible.

He was prepared for immediate surgery and explored under nitrous oxide ether anesthesia. The gallbladder was edematous and indurated. One fairly good sized stone was impacted in Hartmann's pouch. When we separated the omental adhesions from the fundus of the gallbladder, a small amount of bile was released through a small perforation. A routine cholecystectomy was carried out. The patient made an uneventful convalescence and was discharged from the hospital on the eleventh postoperative day.

Case No. 9 (#39705) An 89-year-old white woman had been admitted to the hospital 3½ years previously for pneumonitis and congestive heart failure. She had got along well following her discharge, and on cardiac management had been free of congestive heart failure. Two days before her admission to the hospital, she had noted some vague abdominal distress in the right side, but it had subsided spontaneously. For the following 48 hours she had felt well. Then, shortly after eating, she had pain in the right abdomen which became steadily worse and awakened her at intervals during the night. Early in the morning of her hospital admission she vomited several times, and her pain increased in intensity.

Examination showed a well developed, thin, dehydrated woman in acute distress. Her heart was enlarged, there was an apical systolic murmur, her blood pressure was 150/90, and there were moist rales at the right lung base. The abdomen was slightly distended, and an acutely tender, tense gallbladder was palpable. Her admission temperature was 102.4°F., rectally, and her pulse rate was 92. The white blood count was 24,850, with a slight shift to the left in the leukocyte differential count. She was given normal saline subcutaneously and prepared for surgery later on that same day.

Under a combination of 1 per cent local procaine and gas oxygen anesthesia, the abdomen was explored through a small transverse incision. A large, tense, indurated, edematous gallbladder containing numerous calculi was exposed. Purulent fluid was drained from it by means of a trocar, and the calculi and necrotic mucosa were removed by means of a scoop. A simple cholecystostomy was performed.

The patient had an uneventful convalescence and was discharged on her fifteenth postoperative day with no drainage from the cholecystostomy site and the wound healed *per primam.*

Case No. 10 (#41311) A 70 year-old, obese white man with diabetes mellitus and hypertensive vascular disease was admitted to the hospital two days after the sudden onset of epigastric pain, which radiated up toward the lower sternum and into the right upper quadrant following a noon meal. The pain gradually increased in severity and was followed by nausea and vomiting. When he was seen on the following day, his fever was 102°F., and hospitalization was advised.

On his arrival at the hospital, he appeared to be in acute distress. His heart was slightly enlarged, and his blood pressure was 160/90. The abdomen was distended and tympanitic, and a tender, tense gallbladder was palpable in the right upper quadrant. The white blood count was 12,000, with a normal differential. The icteric index was normal. The blood sugar was 358 mg. per cent.

The patient was prepared for surgery later in the day. Exploration through a transverse incision

was carried out under cyclopropane anesthesia. The omentum was indurated and was adherent to the gallbladder and liver edge. A small collection of bile-tinged fluid under the right lobe of the liver was aspirated. After freeing the omentum, we exposed a large, tense, thick-walled gallbladder. The fundus was gangrenous and was leaking bile from a perforation. On exploration around the cystic and common ducts, marked induation and bile-tinged edema of all structures was encountered. There was a rather sharp fall in the patient's blood pressure as a result of the exploration. Because of the gangrene of the gallbladder, the marked induration around the common and cystic ducts, and the patient's poor general condition, we thought that cholecystectomy was contraindicated. The gallbladder was drained by a trocar, and several small stones were removed. A cholecystostomy was performed.

Wangensteen drainage was instituted postoperatively. The patient's immediate postoperative condition was good, and his course was uneventful until the tenth postoperative day, when he developed a partial wound disruption involving the skin and fat. Since the fascia was intact, we treated the wound disruption by adhesive strapping.

He was discharged on his twentieth postoperative day, with no further drainage from the cholecystostomy site. His wound healed after his discharge from the hospital, but he developed a large ventral hernia.

CONCLUSIONS

1. A study of 225 cases of calculous biliary tract disease reveals a significant percentage of patients in the older age groups, most of whom can be presumed to have had silent cholelithiasis for many years before the onset of the symptoms requiring surgery.

2. Biliary complications in the aged patient with degenerative disease are a challenge to the internist and surgeon and a very real hazard to the patient.

3. Our limited experience with the surgical treatment of calculous biliary tract disease forces us to advocate surgical treatment for silent cholelithiasis, in order to reduce the number of patients in the older age groups requiring biliary tract surgery, frequently as emergency procedures in complicated situations.

REFERENCES

1. Lahey, F. H.: Common and hepatic duct stones. Am. J. Surg., **40**:209-216, (Apr.) 1938.
2. Cole, W. H.: Recent trends in gallbladder surgery. J.A.M.A., **150**:631-637, (Oct. 18) 1952.
3. Mayo, C. W., and Lee, M. J., Jr.: Present or past cholelithiasis diagnosed at laparotomy; study of 730 cases of carcinoma of right portion of colon. S. Clin. North America, **31**:1217-1223, (Aug.) 1951.
4. Glenn, F., and Hays, D. M.: Age factor in mortality rate of patients undergoing surgery of biliary tract. Surg. Gyn. & Obst., **100**:11-18, (Jan.) 1955.

"No class of men needs friction so much as physicians; no class gets less. The daily round of a busy practitioner tends to develop an egoism of a most intense kind, to which there is no antidote. The few set-backs are forgotten, the mistakes are often buried, and ten years of successful work tend to make a man touchy, dogmatic, intolerant of correction, and abominably self-centered.

"To this mental attitude the medical society is the best corrective, and a man misses a good part of his education who does not get knocked about a bit by his colleagues in discussions and criticisms. . . . The very marrow and fitness of books may not suffice to save a man from becoming a poor, mean-spirited devil, without a spark of fine professional feeling, and without a thought above the sordid issues of the day. . . . The man who knows it all and gets nothing from the society reminds one of that little dried-up miniature of humanity, the prematurely senile infant, whose tabetic marasmus has added old age to infancy. . . . He feels better at home, and perhaps that is the best place for a man who has reached this stage of intellectual stagnation."

—SIR WILLIAM OSLER
COUNSELS AND IDEALS FROM THE WRITINGS OF WILLIAM OSLER

Cholangiography in Surgery of the Biliary Tract

At the State University of Iowa

JOHN A. GIUS, M.D., AND C. J. JOHNSON, M.D.

IOWA CITY

OPERATIVE CHOLANGIOGRAPHY was introduced by Mirizzi[1] in 1931 and has become an important part of the surgeon's armamentarium. That interest in the subject has increased in recent years is indicated by the large number of articles that have been published concerning it.[2, 3, 4, 5, 6, 7, 8] The considerable attention which the procedure has attracted results from the need for a more accurate examination of the duct system than has hitherto been possible, and from the widespread availability of the facilities necessary to its performance. Some surgeons reserve operative cholangiography to patients in whom exploration of the common bile duct is planned, but others advise that preparations for performing it should be made in all cases, whether or not the examination is carried out, and a few contend that it should be a routine part of every operation upon the biliary tract for benign disease. We agree with the last of those groups.

OBJECTIONS ANSWERED

Certain objections have been raised to operative cholangiography, and particularly to its routine use:

1. *Added length and complexity of the operation.* The increase in operating time consequent to cholangiography averages, at present, about 25 minutes, but depends upon the number of films required. The complexity of the operation is increased to the extent that the wound towels and drapes must be sewed in place, rather than fastened with instruments. By use of a special technic previously described,[9] the operation is not prolonged beyond the time required to introduce a cannula into the cystic duct, inject the contrast medium, make the X-ray exposures and study the films. There are certain limitations, at present, as regards the choice of anesthetic agent. Only a nonexplosive anesthetic mixture can be employed if an ordinary portable X-ray machine is to be used. But spark-proof machines are now available, and as soon as we can put one of them into operation, we shall be able to use any of the anesthetic agents.

2. *Increased cost to the patient.* There is $25 of extra expense for the X-ray and the contrast medium. We believe that this added cost is justified by the information obtained, but our opinion is difficult to document.

3. *The frequency of unsatisfactory, inconclusive or even confusing films.* In our series, 3.9 per cent of the studies could not be interpreted satisfactorily. In 38.6 per cent of the films there were minor technical flaws, but not ones that interfered with satisfactory interpretation. Because we insisted upon perfect films, anything less was classified as technically imperfect. Our maintaining that high standard, we feel, has been a stimulus for the production of superior films, for the operative cholangiograms that have been provided us recently have reached a high order of technical perfection.

Confusing evidence does occasionally appear on the cholangiogram, and we have not been able to correlate the clinical and radiographic findings with absolute consistency. For example, there have been a few instances in which, after exploration and passage of a probe through the common bile duct and into the duodenum, the dye has not passed into the duodenum. The reasons for that phenomenon are sometimes obscure.

Air bubbles in the duct system were noted in seven cases. In 13 patients the films should have been repeated or the duct should have been explored. The films were originally called negative, but subsequent review cast some doubt upon that interpretation.

4. *The danger of acute pancreatitis due to reflux of the contrast medium from the common duct into the pancreatic duct.* Reflux of dye into the main pancreatic duct was observed in 25 (15.3 per cent) of our cases, and the anatomical arrangement was such that this complication could occur. The postoperative serum amylase levels were not determined, and it is possible that minor, unrecognized forms of pancreatitis developed. However, so far as we have been able to determine, there have been no cases of postoperative

The authors, staff members in the SUI Department of Surgery, wish to acknowledge the assistance of Dr. H. Dabney Kerr, until recently the head of the Department of Radiology, Dr. Stuart C. Cullen, head of the Department of Anesthesiology, and others of their colleagues in all three departments.

pancreatitis or other disturbing reactions to cholangiography.

5. *The possibility of the surgeon's placing undue reliance upon the X-ray findings.* In such a case, it is reasoned, he may fail to recognize or may disregard the established indications for exploration of the duct system.

It would appear that this objection is more theoretic than real. We do not advocate that cholangiographic examination be used as a substitute for other methods of evaluation. It must be used in conjunction with them. The history which the patient gives, the size and thickness of the duct wall, the findings on palpation, etc., must be carefully assessed regardless of the X-ray findings. When there is a discrepancy between the clinical and the radiographic findings, exploration of the common duct is indicated. We believe that with increasing experience, one gains an ability to correlate the findings and a greater confidence in his ability to evaluate the total picture.

Successful cholangiographic examination depends upon the close cooperation and active participation of the surgeon, the anesthetist, the radiologist and the X-ray technician. It requires attention to many details which, when once they have been learned, become almost routine. When the procedure is done only occasionally, the same errors tend to be repeated over and over. Then the results become unpredictable, interpretation is unreliable and the surgeon and others decide "it just isn't worthwhile." To avoid that sequence of events, it is our contention that cholangiography should be a planned part of every operation on the biliary tract.

TECHNIC USED AT UNIVERSITY HOSPITALS

The operating table (one manufactured by the American Sterilizer Company) has a hexagonal hole so placed that when the table is reversed, the patient can be positioned with the right upper quadrant over the aperture. Thus the portable X-ray machine can be positioned under the table, and postero-anterior exposures can be made with the X-ray cassette lying on the anterior abdominal wall (Figures 1 and 2).

In addition to the usual laparotomy instruments, we have available No. 5 and No. 7 ureteral catheters, a saline-filled syringe, a 20 cc. syringe filled with 35 per cent Diodrast (Winthrop-Stearns, Inc.), and sterile pillow cases containing cassettes with 10x12 in. grids.

The table is reversed, and the patient is suitably positioned. The surgeon checks this positioning to insure good results.

A non-explosive anesthetic agent is essential.

After the X-ray machine has been moved into place, a "scout" film is exposed. This step is optional, but it makes for more accurate localization and improved technical quality of the subsequent films.

Drapes and skin towels are sewn in place so that there will be no metallic objects to obscure the field.

If, after exploration, the surgeon decides to secure cholangiograms, the cystic and common bile ducts and the cystic hepatic arteries are exposed.

A silk suture is tied about the proximal cystic duct to prevent possible extrusion of stones from the gallbladder into the common duct during manipulation.

An incision is made in the cystic duct, and a No. 5 or No. 7 ureteral catheter is inserted and tied in place.

Saline is injected to assure a water-tight system. The dye syringe is then attached to the catheter, all instruments are removed from the operative field, and the wound is protected with a sterile towel.

About 5 cc. of 35 per cent Diodrast is slowly injected. Great care is necessary to prevent the introduction of air bubbles. Next, an assistant who has received the loaded cassette in a pillow case positions it over the operative field so that its lower border is at the iliac crest.

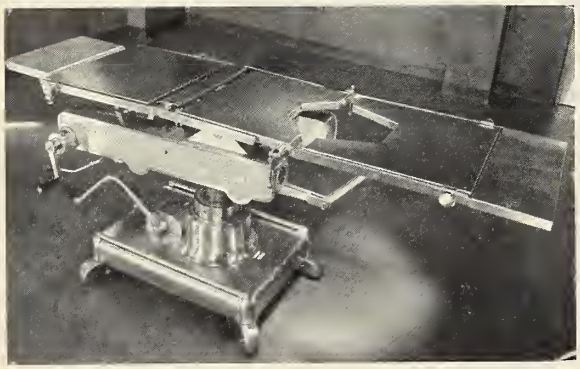


Figure 1. Operating table, showing hexagonal aperture between body and foot piece.

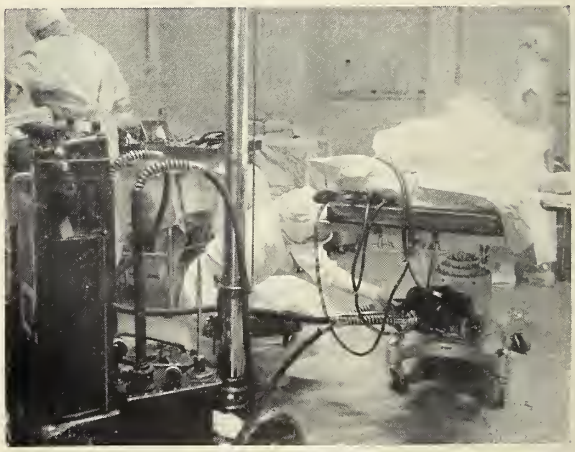


Figure 2. Portable X-ray unit positioned under operating table aperture. The tube is directed upward.

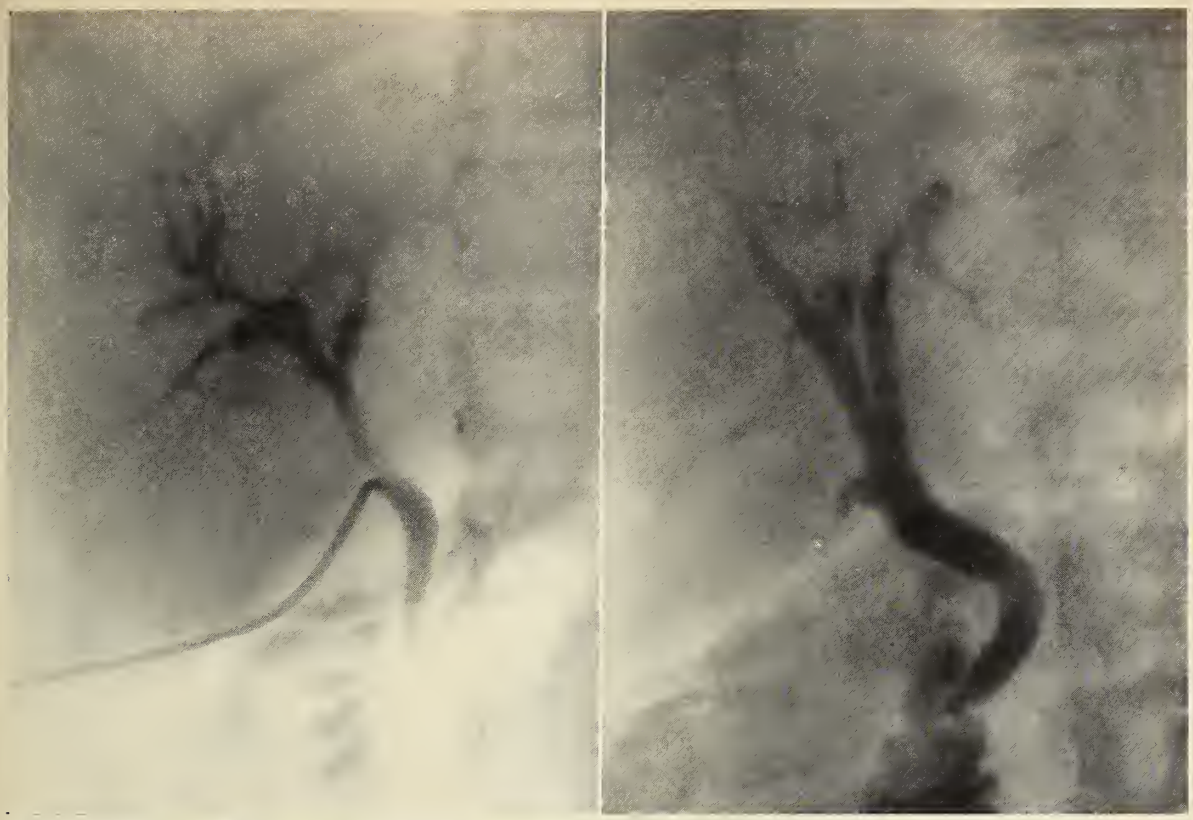


Figure 3. Normal operative cholangiograms. (A) Note the size of the duct system, the absence of filling defects, the passage of dye into the duodenum and the pancreatic duct filling. (B) This is the same as (A), but note that the duct system is larger. There is no pancreatic duct reflux, and the papilla of Vater is prominent.

At the surgeon's signal, the anesthetist arrests the patient's respirations and gives the signal to the X-ray technican for exposure of the film.

An additional 5-10 cc. of dye is then injected, and a second film is positioned and exposed. The second film is optional, and the amount of medium used depends upon the size of the ducts.

While the films are being developed, the gallbladder is removed and the liver bed closed.

The films are now ready for interpretation. If they are normal, (Figure 3) the catheter is removed, the cystic duct is ligated close to the common duct and the wound is closed with drainage.

If defects are seen in the common duct, the catheter is removed, the cystic duct is ligated and exploration of the duct is carried out.

When all stones are thought to have been removed, the duct is irrigated with saline, and probes are passed into the duodenum to assure patency of the ampulla of Vater.

A T-tube is then placed in the common duct, and the cholangiogram is repeated. On several occasions, we have demonstrated residual common duct stones on this film, even after very careful duct exploration (Figure 4).

The cholangiograms are repeated on the seventh to fourteenth postoperative day, prior to the removal of the T-tube.

RESULTS

During a period of 23 months, there were 282 operations on 274 patients for benign disease of the biliary tract (Table 1). In slightly more than half (57.8 per cent), immediate cholangiography was performed. The X-ray studies were totally unsatisfactory in 3.1 per cent. In 15.3 per cent, the pancreatic duct was partially or completely filled, indicating a "common channel" between the common bile duct and the main pancreatic duct.

Cholecystectomy and cholangiography were carried out in 126 cases (Table 2). In this group

TABLE I

OPERATIONS ON BILIARY TRACT FOR BENIGN DISEASE

(Jan. 1, 1953-Nov. 3, 1954)

Total cases 274

	Number	*Per cent*
Operative procedures	282	
Operative cholangiography	163	57.8
Common duct explored	61	21.6
X-rays unsatisfactory	5	3.1
Pancreatic duct visualized on cholangiogram	25	15.3

no indications for exploration of the common duct were noted, except for X-ray findings in 10 cases (8 per cent). Duct exploration was carried out and stones were found in five cases. In the remaining five, no abnormalities were encountered. The

TABLE II
CHOLECYSTECTOMY WITH CHOLANGIOGRAPHY
(126 cases)

	Number	*Per cent*
Normal duct system by X-ray Duct not explored	98	77.7
Abnormal duct system by X-ray Ducts explored—5 positive	10	8.0
Questionable duct system by X-ray Ducts not explored	13	10.3
Cholangiograms unsatisfactory for interpretation	5	3.9
Cholangiograms adequate but technically imperfect	63	38.6

films of 13 (10.3 per cent) other patients, when studied after operation, revealed changes that were suggestive but not diagnostic, of residual common duct disease. Some of those individuals may later have difficulty and require reoperation.

From the cholangiograms of this group, the lesson to be learned is the need for repeated X-ray films, or exploration of the common duct, to make certain that the common duct is free of stones and other pathologic conditions before the abdomen is closed.

Sixty-three (38.6 per cent) of the X-ray studies were technically imperfect, but were adequate for interpretation. This incidence of faulty films is high, but many of them were called imperfect because of minor and probably unimportant details which did not impair their diagnostic value.

TABLE III
COMMON ERRORS IN OPERATIVE CHOLANGIOGRAPHY

Interposition (instruments, Levin tube, marked sponges, etc.)	27
Faulty X-ray exposure	23
Incomplete filling of ducts	15
Duct angulation by catheter	9
Air bubbles in duct	7
Leakage of dye outside duct	6
Motion of patient	3
Failure of dye to enter duodenum	2

The common causes of defects in the films and their frequency are listed in Table 3. Some errors appeared two or more times on the same film, or one film in a series was defective though others were free from defects. We believe that it is important to emphasize these errors so that they can be avoided in subsequent studies. Many are self-evident, as for example those that result from failure to remove instruments or other metallic objects from the operative field or failure to arrest respiration while the film is being exposed. Poor positioning of the patient or of the X-ray machine, or failure to take a scout film preliminary to the operation caused difficulty in several instances. The scout film is particularly important when the patient is obese, for the technician often underestimates the penetration required. In some cases, the semi-rigid ureteral catheter caused angulation of the common bile duct, which, though undersirable, did not interfere with the flow of the contrast medium. Air bubbles in the system are the result of injection of air through the catheter or of a residue of air in the duct after irrigation or dilatation of the sphincter. We believe that these errors can be kept to a minimum if all catheters are completely filled with fluid before they are introduced. In spite of precautions, however, air may enter the duct system. The problem, then, is to differentiate between air bubbles and stones. Usually air bubbles are small and conglomerate. Sometimes they will be seen in the catheter leading to the duct. They will usually move or disappear if the table is inclined, the duct system is injected again and the film is repeated. If two films are made initially, the character of the defects may be clear. If they persist, there can be no question that the duct must be explored.

Leakage of dye from the opening in the duct may obscure the structures. This occurrence is usually the result of one's having failed to secure the catheter in the cystic duct or failed to close the common duct opening completely after introducing the T-tube. When it occurs, one may have to remove the extravasated contrast media by irrigation, repair the leak and repeat the films.

If the anesthetist has been briefed regarding the need for apnea during the X-ray exposure, respiratory motion is unlikely to be a source of trouble. When the injection is complete, the surgeon signals the anesthetist, and he, in turn, tells the X-ray technician to "shoot." This sequence of signals—surgeon to anesthetist to X-ray technician—is an example of the team-work required.

We think that failure of the dye to enter the duodenum may result from duct "spasm" in some instances, but other unrecognized factors involving the distal duct may also play a role.

Sixty-one operations were performed on the common duct (Table 4). In 51 instances the sur-

TABLE IV
OPERATIONS ON THE COMMON DUCT
(61 procedures)

Explored for standard indications		51
(Positive exploration	42=82%)	
Explored for X-ray indications only		10
(Positive exploration	5=50%)	
Exploration negative		14
Positive findings		47
Stones	37	
Stricture	4	
Pancreatitis	4	
Choledochal cyst	1	
Postop. bile leak	1	
Operative cholangiography		47
Pathology demonstrated by X-ray		22

geon had one or more indications (including cholangiographic) for exploring the common duct. Stones or other abnormalities were encountered in 82 per cent of that group. Ten additional patients exhibited only X-ray evidence of common duct disease, and half of them had common duct stones.

Fourteen of the patients explored had no demonstrable disease of the common duct. We have already pointed out (Table 2) that the cholangiograms were questionable in 13 patients when studied in retrospect. The ducts were not explored in this group. Thus, there were 27 patients in whom either further X-ray studies or common duct exploration was indicated.

The predominant operative finding was common duct stones. Multiple stones were frequent, and nearly all were located in the terminal portion of the duct system (Figure 5).

Operative cholangiography in conjunction with common duct exploration was carried out in 47 cases. When the indications for exploration were clear, usually no preliminary X-ray examination was performed. In 22 cases, the disease in the duct system was demonstrated. Cholangiograms were made prior to closure of the abdomen in nearly all cases, and before removal of the T-tube (in the postoperative period) in all cases.

SUMMARY AND CONCLUSIONS

1. Operative cholangiography is a safe, relatively easily accomplished and important adjunct to the surgeon's armamentarium in the treatment of biliary tract disease. We believe it should be a planned part of all operations in this area.

2. The cost ($25), the increased operating time (about 25 minutes) and the occasional errors in technic or interpretation do not constitute valid reasons for omitting operative cholangiography.

3. The technic of cholangiography that has been described, one which takes advantage of an aperture in the operating table through which the X-ray beam can be directed upward to a cassette placed on the anterior abdominal wall, is a simple one and does not seriously interfere with the operative procedure.

4. With teamwork and increasing experience, cholangiographic visualization has become a satisfactory procedure. In our series, extending from January 1, 1953, to November 3, 1954, the films were adequate for interpretation in 97 per cent of 163 cases.

5. The results of operative cholangiography should always be correlated with the findings on exploration, and should not be regarded as the only important criterion upon which the need for

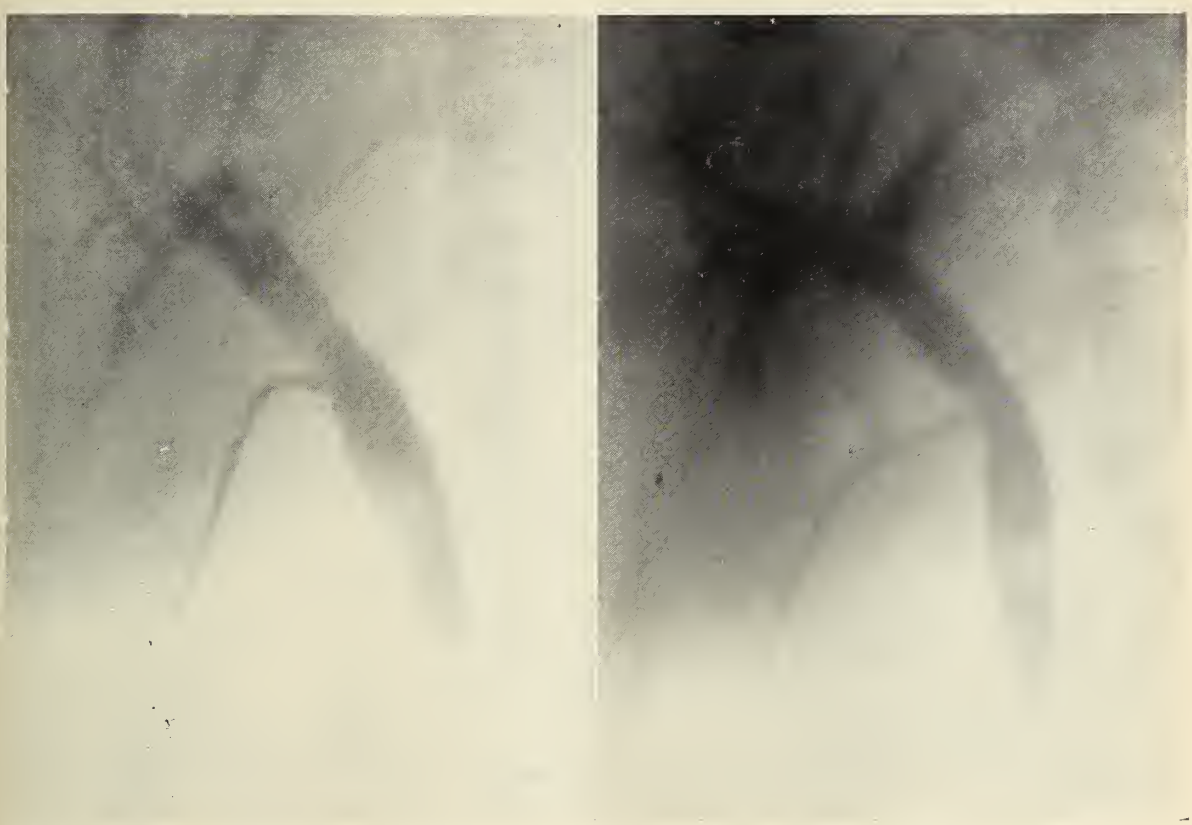


Figure 4. These are cholangiograms of a patient in whom common duct stones were neither suspected nor palpable. (A) Routine film showing many filling defects with no passage of the media into the duodenum. (B) Cholangiogram after careful exploration of duct, removal of stones and insertion of T-tube prior to closure. Multiple defects remained, the duct was reopened and three more stones were removed. The final cholangiogram was negative.

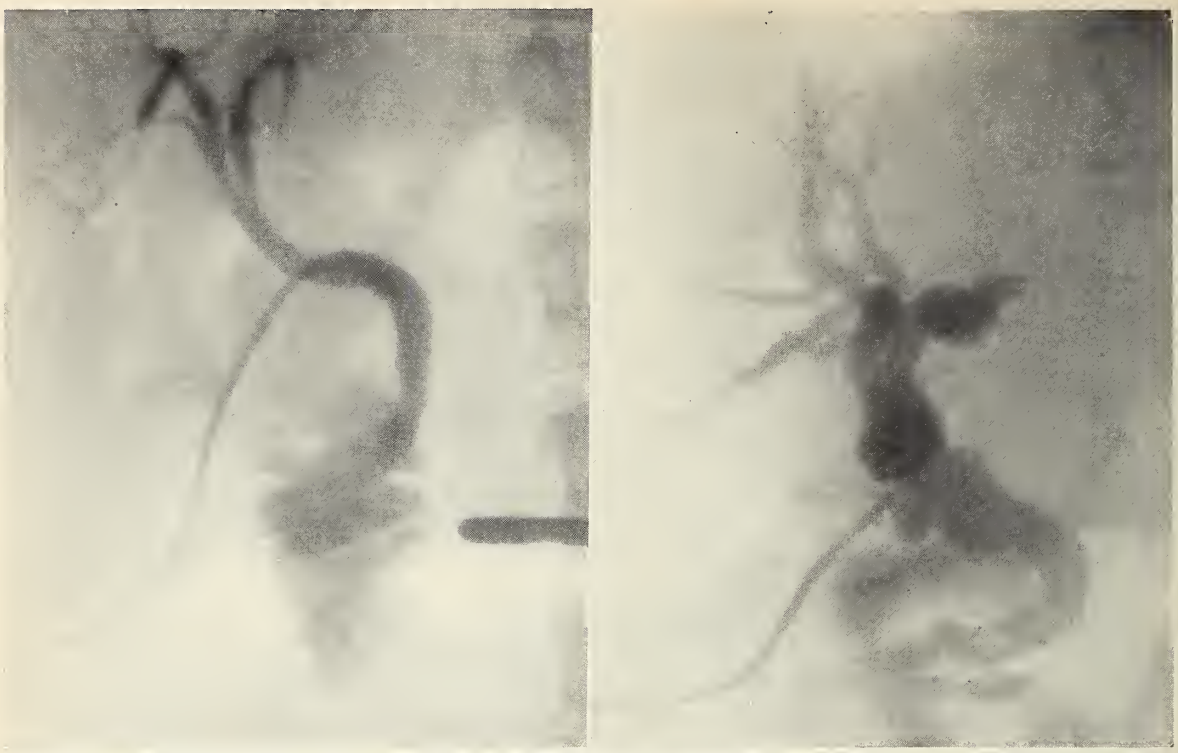


Figure 5. (A) Routine cholangiogram revealing two small stones just above the tube in the cystic duct. These were neither suspected nor palpable. There was no dilatation or obstruction. After removal of the stones, a cholangiogram was negative. (B) Cholangiogram in a case of suspected and palpable common duct stone. Note the dilatation of the duct, the filling defect at the lower end, some duodenal filling and pancreatic duct reflux. The stone was removed and the final cholangiograms were negative.

common duct exploration can be determined. The operative cholangiogram is not a substitute for surgical judgment.

6. Of ten patients subjected to common duct exploration on the basis of cholangiograms, only five were found to have common duct stones.

When the films were reviewed in retrospect, possible errors in interpretation were noted in 14.3 per cent. Those were the films on the basis of which patients were subjected to common duct explorations with negative findings and the films that appeared to reveal unexplainable defects that the surgeons decided not to explore. Some of the apparent defects probably were artefacts (air bubbles, spasm of the sphincter, etc.), but one cannot be positive on the basis of the available films or the clinical course of the patients. For this reason, where the issue is in doubt we should like to emphasize the desirability of defining such defects unequivocally, if possible, by repetition of the cholangiogram or by exploration of the duct.

7. The common bile duct was explored in 61 (21 per cent) of the patients and was positive for stones or other abnormalities in 82 per cent. The results of examination were positive in 50 per cent of the patients in whom exploration was carried out for cholangiographic reasons only. Thus, in 3 per cent of the entire series, the cholangiogram was solely responsible for the recognition of the presence of common duct stones. The overall incidence of positive findings in the group subjected to common duct exploration was 77 per cent.

8. We should like to emphasize the importance of performing cholangiography *after* common duct exploration and before the abdomen is closed. Incomplete removal of stones is a possibility unless check films are made.

REFERENCES

1. Mirizzi, P. L.: Colangiografía durante las operaciones de vias biliares. Bol. y. trab. Soc. cir. de la Buenos Aires, **16**:1133-1161, (Oct. 5) 1932; Progresos de la clin. Madr., **41**:213-221, (Apr.) 1933.

2. Hicken, N. F., Stevenson, V. L., Franz, B. J., and Crowder, E.: Technic of operative cholangiography. Am. J. Surg., **78**:347-355, (Sept.) 1949.

3. Mixter, C. G., Hermanson, L., and Segal, A. L.: Operative cholangiography; evaluation of 406 cases. Ann. Surg., **134**:346-350, (Sept.) 1951.

4. Partington, P. F., and Sachs, M. D.: Cholangiography. In: Monographs on Surgery. New York, Thomas Nelson and Sons, 1951.

5. Douglas, T. C., Lewis, R. B., and Mehn, W. H.: Operating room cholangiography. A.M.A. Arch. Surg., **68**:422-431, (Apr.) 1954.

6. Johnston, E. V., Waugh, J. M., and Good, C. A.: Residual stones in the common bile duct; question of operative cholangiograms. Ann. Surg., **139**:293-301, (March) 1954.

7. Stone, C. S., and Garrett, W.: Operative cholangiography. Bull. Mason Clinic, **8**:109-115, (Sept.) 1954.

8. Kantor, H. G., Evans, J. A., and Glenn, F.: Cholangiography. A.M.A. Arch. Surg., **70**:237-252, (Feb.) 1955.

9. Gius, J. A., Tidrick, R. T., and Hickey, R. C.: Extension of immediate cholangiography in common duct surgery. Surgery, **36**:460-467, (Sept.) 1954.

Problems in the Management of

Congenital Anomalies of the Testes

EDWARD M. HONKE, M.D., AND LAWRENCE E. PIERSON, M.D.

SIOUX CITY

WHEN ONE HEARS of congenital anomalies of the testes, his first thought is of the undescended testes. However, many other anomalies also occur, and these possibilities should be kept in mind. The subject is broad and encompasses many different aspects—embryologic, anatomic, endocrinologic, surgical, psychiatric and others. Since to cover all of them is not within the scope of this paper, we shall limit ourselves to the clinical viewpoint.

Testicular anomalies are not a development of modern times. Even the Bible contains a statement of Christ's regarding "eunuchs who were so born from their mother's womb."[1] And in the fourteenth and fifteenth centuries some Europeans took cognizance of testicular deficiencies by forbidding men with undescended testes to marry.

The mobilization for World War II focused attention once again on testicular anomalies and stimulated a great deal of research, some of which is still in progress.

The literature now available contains many divergent opinions and many different interpretations of identical statistics. Occasionally people misinterpret statistics and unintentionally make their conclusions support what they should like to believe to be the actualities.

Additional confusion is caused by authors taking their statistics from hospitals only, and failing to include office practices. Also, most hospitals do not clearly identify readmissions, and physicians frequently do not list all anatomic diagnoses. These deficiencies allow discrepancies between the various sets of statistics.

Probably one of the most difficult problems in assembling accurate data in this type of pathology arises because no one indivdual sees a large number of these cases. In consequence, statistics must be gathered from numerous places and from many individuals. There is little doubt that our opinions would be altered if the above-mentioned sources of error could be eliminated. Some years ago, Campbell[2] wrote an excellent article in which these inadequacies were thoroughly covered, and it is excellent reading for anyone interested.

The following table, taken from Campbell's book on urology,[3] is an excellent outline for a discussion of this subject:

Anomalies of development
- Anorchism
- Synorchism
- Polyorchism

Anomalies of position
- Inversion
- Retroversion
- Ectopia
- Cryptorchism

Anorchism,[3] or absence of one or both of the testes, is a relatively rare condition, only 47 cases having been reported. Eleven of them were bilateral and 36 were unilateral. Such cases must be proved by autopsy, and even then it is possible for small glands to be overlooked. This anomaly may consist of the absence of any part, or even all of the genital tract on one side may be involved. Any patient with bilateral anorchism must be sterile and also must have a severe glandular imbalance.

The following case report illustrates what may have been a unilateral anorchism limited to the left testis. R. B., a normal appearing man, age 20, had a normal right testis and what was thought to be an undescended testis at the external inguinal ring on the left side. At surgery, a hernial sac was found and repaired. The vas and spermatic cord were separated, and what was thought to be the testis was the epididymis ending in a blind pouch with no testicular tissue present. A brief search was made, but no testis



Fig. 1. Section of epididymis from a case of possible anorchism. Hematoxylin and Eosin X100.

could be found. Ordinarily, the patient's case would be called one of unilateral anorchism, but it is possible that the testis and epididymis developed separately and that there was an embryologic failure of union between the two (Figure 1).

Synorchism[3] designates a fusion of the testes into a single mass. It is rarer, only eight cases having been reported in the literature.

Polyorchism is reported as having been proved 19 times. All of us have seen patients who have been told they have three testes, and there is no question that their self-esteem has been enhanced to a considerable degree. Further investigation, however, has usually revealed that the so-called third testis is a small, encysted hydrocele or spermatocele. Ordinarily, some other glandular cell rests are found in the scrotum, but they do not pose any great therapeutic problem.

Inversion and retroversion are rarely seen and do not appear to have much pathologic significance. A knowledge of the proper anatomic relationship of the scrotal contents makes their recognition an easy matter.

Some confusion exists over the term *ectopic testis* because some authors use the term to designate cryptorchism, as well as the entity to which it properly belongs. Properly used, however, *ectopic testis* is the name to be given only those cases in which there has been an aberrant descent and in which the testis lies somewhere outside of its usual course of descent. These locations are usually femoral, perineal, pubic, inguinal or abdominal. The basic concepts of treatment are identical with those for cryptorchism, nevertheless.

The undescended testis is a problem about which there has been and is a great deal of disagreement. As on all other controversial questions, reams of material are available expressing the different viewpoints, and a solution acceptable to everyone would be difficult to find. A small number of physicians feel that no therapy at all is indicated. Their conclusions are based on debatable statistics, and upon rather recently gathered evidence that our past methods of therapy have been more or less ineffective, especially as regards testicular function. But the majority of urologists are of an altogether opposite opinion. They feel that treatment is essential and that it should be instituted much earlier than has been the usual practice.

Let us examine briefly the purposes for which treatment is undertaken. For ease of presentation, we have listed them in chart form, but the order of that enumeration is not to be taken as representing our estimate of their relative importance.

PURPOSES OF THERAPY

1. Repair of hernia
2. Cosmetic improvement
3. Psychiatric benefits
4. Minimization of trauma to testes
5. Reduction in possibility of malignancy
6. Facilitation of early diagnosis of malignancy
7. Initiation or preservation of testicular function
    a. Spermatogenesis
    b. Hormonal balance

Little needs to be said regarding hernia. There is general agreement that either a hernia or a potential hernia exists in almost every case. There are times when only a vaginal process is present, but hernias must be repaired simultaneously with the orchiopexy, and *vice versa*. If cryptorchism is associated with demonstrable hernia, surgery should be performed immediately.

The cosmetic aspect is undoubtedly closely associated with the psychiatric problem, although such is not necessarily the case. There is no question that boys notice such abnormalities in one another, and unkind remarks often fall on ears already sensitized by self-depreciation. Jibes serve to place emphasis on the fact that the patient is different from other boys, and in his own estimation he probably seems not to measure up to his fellows in other respects.

Many of the psychiatrists with whom we have discussed this problem say that many forms of maladjustment originate with this anomaly. The psychiatric problem often becomes acute, and it may lead to suicide. Such maladjustments are most successfully treated before the individual reaches puberty. After that time, treatment is more difficult, particularly if it is accompanied by such difficulties as sterility or sexual inadequacy.

Every physician, and indeed every male, is aware of the clinical syndrome of testicular trauma. But it certainly needs elucidation. Abdominal testes are not subject to trauma, of course, but those located in or anterior to the inguinal canal are. Those located just below the inguinal canal or over the bone are most subject to injury. Testicular deficiencies from frequent trauma have not been extensively or accurately investigated, but some evidence is available, and the opinion often is expressed that frequent trauma may be the basis of some increased fibrosis and some degree of deficiency, involving either the spermatogenic or the hormonal function, or both. Yet, whether or not such injuries are debilitating, the higher frequency of trauma resulting from the abnormal position of the testis tends to accentuate the patient's consciousness of his defect, and thus to aggravate whatever psychiatric difficulty already exists.

Malignancies in the undescended testes have been a major subject for controversy, the principal reasons having been disagreements over methods of collecting and interpreting statistics. Some years ago, Mackenzie and Ratner[4] stated

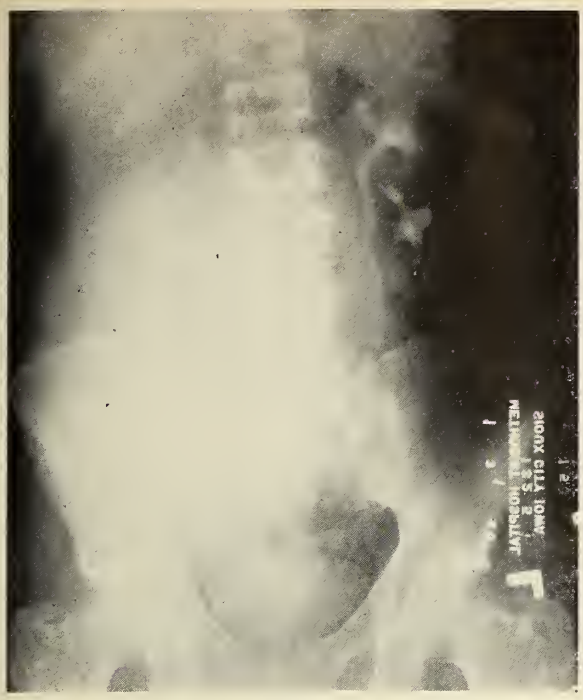


Fig. 2. Pre-radiation and pre-operative intravenous pyelogram in a patient with bilateral undescended testes and a seminoma involving the right testis. The large, dense mass demonstrates the size of the malignant growth. No radiologic evidence of renal function can be visualized.

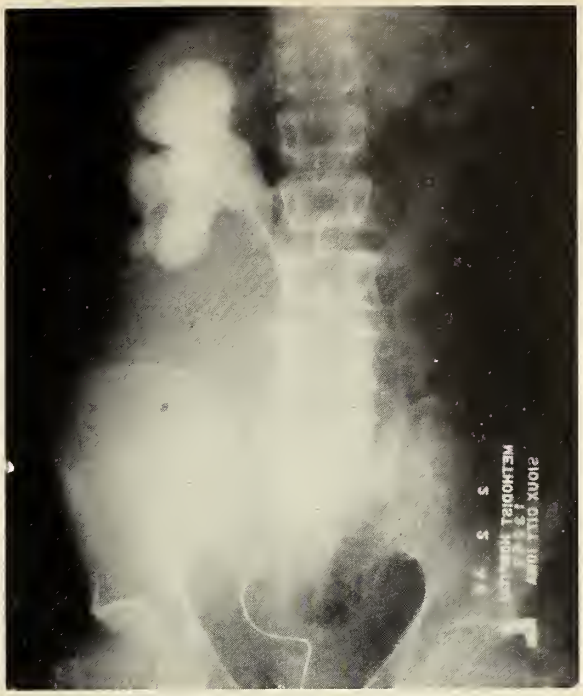


Fig. 3. Unilateral right retrograde pyelogram on the same patient, showing marked caliectasis and pyelectasis with medial ureteral deviation. Taken before radiation and before surgery.

unequivocally that there was no evidence to support the contention that malignancy occurs more frequently in an undescended testis than in a normally placed one. Last year, Grove[5] came to a similar conclusion. But a search of the literature reveals that other responsible investigators have presented statistics leading to quite a different conclusion. We have arranged them in tabular form:

Names	*Source*	*Incidence*
Hinman[6]	649 testical malignancies	12.2% in undescended testes
Dean[7]	Not given	13.5% in undescended testes
Murray and Ewert[8]	Lahey Clinic, 5 yr. period	28.0% in undescended testes
Gordon-Taylor and Till[9]	50 testical malignancies	30.0% in undescended testes
Gilbert and Hamilton[10]	700 testical malignancies	11.0% in undescended testes
Lewis[11]	World War II Review	20 times more frequent
Hinman[12]	40,000 hospital admissions	20 times more frequent

At the present time, the preponderance of evidence indicates that malignancies *do* occur more frequently in undescended testes than in normally placed ones. However, in view of the previously mentioned difficulties regarding statistical data, caution and judgment must be used, and it is evident that unanimity of opinion cannot be achieved during the immediate future.

No one, so far as we know, maintains that orchiopexy prevents malignancy. Gilbert[13] found 77 cases in which testicular malignancy had developed after orchiopexy, and Rusche[14] had four such cases himself. Yet the infrequency of such occurrences leads one to the conviction that orchiopexy may decrease the incidence, and at present there are no accurate figures available to refute that belief.

As regards this phase of treatment, the only point on which agreement exists is that orchiopexy facilitates earlier diagnosis, and for that reason should assist in lowering the morbidity and mortality.

The age of the patient is a factor in any decision regarding surgery, and since the incidence of testicular tumors is extremely low in patients over the age of 40, many physicians have hesitated to advise surgery after that age. Yet the following case demonstrates that it does occur, and that surgical results are sometimes gratifying.

W. E. L., a white man 48 years of age, presented himself in 1940 with a large mass on his right side and bilateral abdominal testes. Intravenous pyelography demonstrated good function in the left kidney, but no function at all in the right (Figure 2). Retrograde pyelography demonstrated a marked right hydronephrosis, with practically no drainage and medial deviation of the right ureter (Figure 3).

On a biopsy made February 6, 1940, the pathologist's report was seminoma of the testes. Ap-

proximately 2,400 Roentgen units were administered, and the mass completely disappeared. In April 1940, the small testis was removed. The



Fig. 4. Unilateral right retrograde uretero-pyelogram, taken 7 yrs. postoperatively, showing marked decrease in caliectasis and pyelectasis and normal ureteral position with no evident urinary obstruction.

patient was seen again in 1946 and 1951, and the postoperative pyelogram taken in 1946 is shown here as Figure 4. Up to the time that the patient died, in September, 1954, from a cerebral hemorrhage, he never exhibited any signs of metastasis. No autopsy was performed, but if this case is all that it seemed to be, perhaps it indicates that the prevalent opinion regarding the age limitation for surgery of this type needs reconsideration.

When we come to the last of the purposes for which therapy is undertaken, the institution or preservation of testicular function, we once again find a great diversity of opinions. It is in this field that most research has been and is still being done, and it seems possible that in the near future a common understanding will be reached so that there will be more general agreement as to therapeutic management.

Urologic surgeons have been inclined to judge the success of surgery by anatomical position, size and consistency. Recent investigations, however, indicate that fertility has little correlation with those characteristics.

Robinson and Engle[15] substantiated an increasingly prevalent opinion that therapy must be instituted earlier than puberty if these objectives are to be achieved. Their entire series comprised over 150 cases, but we want to refer in particular to the part of their report that deals with 20 testicular biopsies taken from patients who had had previous orchiopexies. Only one of the testes was found to be normal from a microscopic standpoint. Additional biopsies performed on both normal and undescended testes at progressive ages demonstrated that up to age 5 the two are similar in development. From age 5 onward, the development of the undescended testis is progressively retarded, and if orchiopexy is postponed until puberty, normal development apparently does not take place. The chart reproduced as Figure 5 is theirs, and it amply demonstrates their viewpoint.

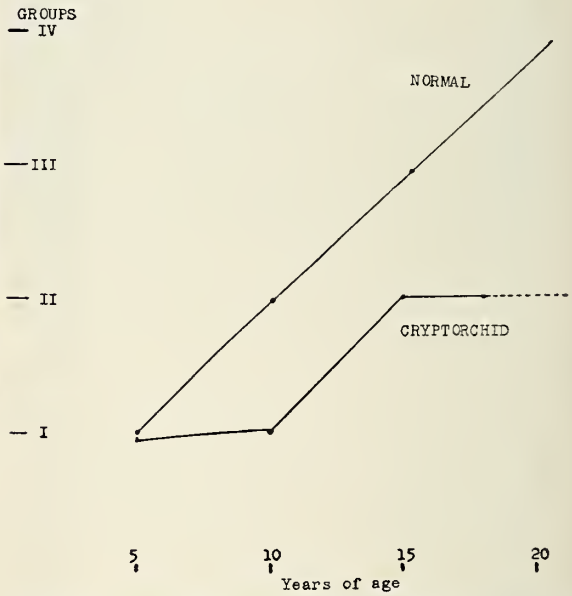


Fig. 5. Graph showing—(1) Steady growth of normal testis and (2) delayed growth of cryptorchid testis and age when it is delayed most. Reprinted by permission from John N. Robinson and Earl T. Engle, "Some observations on the cryptorchid testis," J. Urol., Vol. 71, No. 6, June 1954.

Nelson[16] did bilateral biopsies on three unilateral cryptorchids and found germinal cells lacking on both sides. Those findings appear to show that there is a constitutional defect in some cases, but further study needs to be done. Nelson has found a similar pathology in biopsies on normally descended testes in patients with a sterility problem, a fact which seems to indicate that such a constitutional defect is not limited to patients with maldescent or non-descent. It may have been a coincidental finding.

Some physicians feel that a similar constitutional factor is repsonsible for the tendency to malignant growth, and that the prime factor is not abnormal location. They advise extirpation, rather than transplantation to a new site. But that view is not generally accepted at this time and must await further substantiating evidence.

Fertility is the best test of successful surgery, but the necessary follow up is most difficult to accomplish. Smith[17] carried out sperm counts on 36 treated and 35 untreated patients with unilateral cryptorchism and got totals that were essentially the same. His report implied that orchiopexy had not increased the sperm count. These orchiopexies were not done at the age of 5 or 6, but were delayed considerably.

McCollum[18] had 15 patients with bilateral cryptorchism, all of whom were operated upon at or near puberty. Five of them had children, subsequently, and six were potentially fertile, as judged by sperm count. Four were considered sterile. This is an unusually high percentage of successes, and it has been difficult to duplicate. It is especially hard for us to reconcile that unusually good set of clinical results with Robinson and Engle's finding[15] of one microscopically normal testis in 20 orchiopexies, to which we have referred previously.

The more recent work done by Robinson, Engle, Nelson and others indicates that not only are germinal cells affected, but Leydig and Sertoli cell growth is retarded, though in a much lesser degree. If there is marked retardation, symptoms of eunuchoidism could develop. Further evidence of interstitial tissue damage is suggested by the fact that postpubertal cryptorchids have an elevated excretion of urinary gonadotrophins.

The question as to whether earlier surgery would prevent these pathologic changes and permit a normal development of an undescended testis is at present unanswered and needs additional time and follow up. At present, however, it seems the only logical conclusion, and it implies that meticulous surgery is required to assure adequate vascularity and complete development of the testis operated upon.

Hormone therapy is a phase about which little is thoroughly understood. Investigation of this facet of the problem received its first impetus from animal experimentation, but experimental success in that field does not assure similarly enlightening discoveries regarding human beings.

The pituitary gonadotrophic hormone contains two fractions, both of which are involved in normal testicular function. One of them is known as the follicle-stimulating hormone (FSH), and the other as the interstitial-cell-stimulating hormone (ICSH)—the counterpart of the female luteinizing hormone (LH). At present, the specific roles of these two hormones in the process of spermatogenesis is not entirely clear. FSH is known to stimulate early spermatogenesis, but by itself it will not carry the process to completion. On the other hand, ICSH, which is known to stimulate the Leydig cells to produce androgen and to influence differentiation of Sertoli cells, will continue spermatogenesis to completion when it is used in combination with FSH.

Antuitrin S, a chorionic gonadotrophin, is the most widely used preparation in the endocrine treatment of cryptorchism. It differs from true pituitary gonadotrophin in that it is recovered from pregnancy urine and is predominately ICSH in action and has much less of the FSH factor. The usual dose varies between 500 and 3,000 units two or three times weekly, but we do not wish to be understood as having voiced an opinion as regards what constitutes an adequate or optimum amount and frequency.

Some men have used testosterone as replacement therapy, rather than gonadotrophins as stimulative therapy. However, many report failure with this method, and it is well known that testosterone depresses the testes, particularly if given in large doses. The androgen probably has a direct effect upon the pituitary, rather than upon the testes themselves. The mechanism is not very well understood, and there is some disagreement regarding it.

Normally sufficient production of androgen accompanies adolescence to provide adequate stimulus for testicular descent if mechanical factors have not intervened. If a deficiency of gonadotrophic hormones has been responsible for non-descent, administering them should be most successful in patients having bilateral non-descent or bilateral abdominal testes. Yet it is in these very cases in which the highest percentage of failures with gonadotrophin therapy has been reported.

In unilateral cryptorchism, the percentage of cases successfully treated with gonadotrophins parallels rather closely the percentage in which spontaneous descent of the testes occurs either before or at puberty. Also, if sufficient stimulus is present to produce unilateral descent, then why not bilateral, unless mechanical or other factors are hindrances?

It is well known that many testes which have not descended into the scrotum by the age of 5 or 6 will descend before or at puberty. Yet recent reports that we have mentioned indicate that if the institution of therapy is delayed until that latter time, many testes will never develop to their normal capacity.

If patients are seen initially at or near puberty, it may be permissable to advance puberty slightly. But if that procedure is not immediately successful, then surgery should be utilized as soon as possible.

In view of recent developments, it would seem most desirable for us to see these patients at the age of 5 or 6. We ought not to use gonadotrophins to advance puberty to such an early age, for when that has been done, it has resulted in some highly undesirable psychologic problems. Certainly there

is little value in substituting one problem for another, and besides, there is no assurance that gonadotrophin therapy would be successful.

Orchiopexy, then, is the treatment of choice at this early age. It is true that some testes operated upon would normally have descended at or near puberty. But since evidence indicates that those which descend normally but late never reach full development, the possibility that they may come down of themselves is not a valid contraindication to early surgical intervention.

SUMMARY AND CONCLUSIONS

Although many testicular anomalies occur, the commonest and most perplexing problem is the management of the undescended testis.

The most important objective in therapy is the preservation of testicular function. And early surgery appears to be the treatment of choice.

The prevailing opinion at present is that malignancy occurs more frequently in the undescended testis than in the normally placed one. It is obvious that there are inaccuracies in statistical data and that if these could be eliminated, the percentages might be altered in one direction or the other. Patients should not be told that orchiopexy will prevent malignancy, but that it will lessen the possibility of it and will facilitate early diagnosis in case it develops. When cryptorchism is associated with a clinically demonstrable hernia, surgery should be early, and gonadotrophin therapy should not be used.

Using gonadotrophin therapy to advance puberty and aid testicular descent does not appear rational except in patients who are seen for the first time at or near puberty. It should never be employed in the treatment of patients seen at the age of 5 or 6.

Recent evidence demonstrates that orchiopexy done at the age of 5 or 6 offers the best opportunity for obtaining normal testicular development and also for fulfilling the other purposes of therapy. Great care must be taken for the preservation of adequate vascularity, for it is essential to a normal development.

There is a great need for continued research on the testes so as to provide solutions for the many unanswered problems.

REFERENCES

1. The Gospel According to St. Matthew, **19**:12.
2. Campbell, H. E.: Incidence of malignant growth of the undescended testicle; critical and statistical study. Arch. Surg., **44**:353-369, (Feb.) 1942.
3. Campbell, M.: Urology. Philadelphia, The W. B. Saunders Co., 1954, vol. 1, p. 476ff.
4. Mackenzie, D. W., and Ratner, M.: Malignant growth in undescended testis; review of literature and report of two cases. J. Urol., **32**:359-369. (Oct.) 1934.
5. Grove, J. S.: Cryptorchid problem. J. Urol., **71**:735-741, (June) 1954.
6. Hinman, F.: "Tumors of testes." In: Hugh Cabot: Modern Urology, 1924, Vol. 1, p. 580.
7. Dean, A. L.: Teratoid tumors of testis. J.A.M.A., **105**:1965-1971, (Dec. 14) 1935.
8. Murray, O. B., and Ewert, E. E.: Malignant disease in undescended testis. S. Clin. North America, **27**:709-713, (June) 1947.
9. Gordon-Taylor, G., and Till, A. S.: Malignant disease of the testicle. Brit. J. Urol., **10**:1-45, (Mar.) 1938.
10. Hamilton, J. B., and Gilbert, J. B.: Bilateral testicular cancer. Cancer Research, **2**:125-129, (Feb.) 1942.
11. Lewis, L. G.: Cryptorchism. New York St. J. Med., **54**:3078-3082, (Nov. 15) 1954.
12. Hinman, F., and Benteen, F. H.: Relationship of cryptorchism to tumor of testis. J. Urol., **35**:378-381, (Mar.) 1936.
13. Gilbert, J. B.: Studies in malignant testis tumors; tumors developing after orchidopexy; report of two cases and review of 63. J. Urol., **46**:740-747, (Oct.) 1941.
14. Rusche, C.: Testicular tumors; clinical data on 131 cases. J. Urol., **68**:340-353, (July) 1952.
15. Robinson, J. N., and Engle, E. T.: Observations on cryptorchid testes. J. Urol., **71**:726-734, (June) 1954.
16. Nelson, W. O.: Problems of testicular function. J. Urol., **69**:325-338, (Mar.) 1953.
17. Smith, D. R.: Treatment of cryptorchism. Calif. Med., **81**:379-381, (Dec.) 1954.
18. MacCollum, D. W.: Clinical study of spermatogenesis of undescended testicles. Arch. Surg., **31**:290-300, (Aug.) 1935.
19. Howard, J. E., and Scott, W. W.: "Cryptorchism." In: Textbook of Endocrinology, ed. by Robert H. Williams. Philadelphia, Saunders, 1950, p. 322.
20. Grollman, Arthur: Essentials of Endocrinology, Second Edition. Philadelphia, Lippincott, 1947, p. 486.
21. Charney, C. W., Conston, A. S., and Meranze, D. R.: Development of testis. Fertility and Sterility, **3**:461-479, (Nov.-Dec.) 1952.

CONFERENCE ON JUVENILE PROBLEMS

Juveniles will present their own ideals, ambitions, pet peeves and problems for the consideration of adults interested in the prevention of delinquency at an all-day meeting in the Iowa State College Memorial Union, at Ames, October 26, under the sponsorship of the Governor's Conference on Children and Youth.

The theme for the meeting is "Growing Up Today," and the survey of the problems has been subdivided into (1) Basic Skills, (2) Purposes of Education, (3) Attitudes and Prejudices of Family Life as Youth Stimulants, and (4) Employment and Work Experience. The registration fee for adults is $1.00, and physicians are encouraged to attend.

The Iowa State Medical Society's representative on the Governor's Conference on Children and Youth, since its inception several years ago, has been Dr. William M. Sproul, of Des Moines.

KANSAS CITY SOUTHWEST CLINICAL SOCIETY

At the Annual Fall Clinical Conference of the Kansas City Southwest Clinical Society, in the Municipal Auditorium at Kansas City, Missouri, October 3-6, 15 distinguished lecturers will read papers, there will be a clinicopathologic conference on diabetes, and there will be panel discussions of nonmalignant lung diseases, postcholecystectomy syndrome, bleeding gastrointestinal lesions, urinary tract infections, and hormones and newer drugs. Operative procedures will be presented by color television, and the Edward Holman Skinner Memorial Lecture will be delivered by Dr. Eugene P. Pendergrass, professor of radiology at the University of Pennsylvania.

Acute Hemolytic Anemia in Infectious Mononucleosis

A Report of a New Case and a Review of the Literature

L. J. KIRKHAM, M.D.

MASON CITY

SINCE 1943, WHEN Dameshek[1] first reported a case of infectious mononucleosis with acute hemolytic anemia, ten other cases[2, 3, 4, 5, 6, 7, 8, 9, 10, 11] have been described in the literature, and the case reported herein brings the total to twelve.* This syndrome is of particular interest because the addition of hemolytic anemia changes an especially benign disease into a potentially serious one. The case reported by Wilson *et al.*[4] actually required splenectomy for control of the anemia.

CASE REPORT

P. D., an eight-year-old white girl, was first seen on April 11, 1955, after she had been ill for a week with fever and malaise. She had vomited once three days previously. At the onset, she had three or four small erythematous papules scattered over her body, but they had cleared completely within three days. She also had complained of some mild pain and soreness in her right shoulder, and of mild upper abdominal pain. She was given a total of 500 mg. of Achromycin on April 11, but no other medication. That evening she voided dark brown urine which did not change color on standing, and for the next four days she voided similarly colored urine. She was admitted to the hospital on April 12.

The patient's history was unremarkable, except for the report that she sunburned easily and that she had had a mild anemia several years previously. There was no mention of her having been given barbiturates or sulfonamides at any time, and there was no history suggestive of peripheral neuritis. Her family's medical history included no cases of hemolytic disease. She came of Irish ancestry. Her mother was living and well, but her father had died nine months previously of myocardial infarction at the age of 36. He had had a mild hypertension and "essential hematuria" for about 15 years prior to his death.

The girl's physical examination showed a blood pressure of 110/70, a pulse of 98 and a temperature of 103° F. There was a mild acute pharyngitis, with tonsils enlarged 2 plus. The lymph nodes in all cervical areas and in the axillary, epitrocholear and inguinal regions were definitely enlarged. The spleen was palpable 3 cm. below the costal margin, but was not tender. The liver was tender, however, and was thought to be slightly enlarged, although the edge could not definitely be felt. Except for a Grade I apical systolic murmur, the remainder of the physical examination was within normal limits. There was no trace of rash, and the neurologic examination was normal. There was a suggestion of icterus in the sclerae.

During the first two weeks, the patient ran a remitting fever of about 102° F., but it gradually fell to normal over the following two weeks. She was lethargic during the first week, and her appetite was capricious for twice that length of time. After the first day, her urinary output averaged about 1,500 cc. per day. The treatment she received was essentially symptomatic, plus bed rest and Chloromycetin, 1 Gm. per day for the first five days. Examination on June 18 showed her normal except for a few shotty cervical and axillary lymph nodes. Her spleen was not palpable, nor was her liver. She was eating well and appeared normal in all respects.

On June 18, the presumptive three-tube test for warm agglutinins, cold hemolysins and acid hemolysins, as described by Harrison,[14] was negative. On June 26, the patient's blood was tested for isoagglutinins, isohemolysins, autoagglutinins and autohemolysins at temperatures of 3°, 22°, 37° and 40° centigrade. Beef albumin instead of saline was used as the diluent.[29] That same day, eight hours after the child had ingested 250 mg. of Achromycin, these same tests were repeated. All tests were uniformly negative, both before and after the Achromycin. Table 1 contains records of the other laboratory procedures that were carried out. Most of the lymphocytes seen in the blood smear were considered typical of infectious mononucleosis.

DIFFERENTIAL DIAGNOSIS

Table 2 is a listing of the commonest clinical and laboratory findings in infectious mononucleosis, modified from Harrison,[13] with each reported case compared to the listing. Too much reliance upon the clinical findings is inadvisable in a disease of such protean manifestations, unless one accepts the implication contained in Hoagland's paper[15] that there is a certain basic and almost invariable

* Wasserman *et al.*[12] included a case of infectious mononucleosis in their discussion of secondary hemolytic anemia, but it was not included in this review because of the paucity of data. Including their case would bring the total to 13.

TABLE 1

	Apr. 11	Apr. 13	Apr. 14	Apr. 16	Apr. 17	Apr. 21	Apr. 27	May 11	June 8	June 9
Hemoglobin	10.7	11.0			11.5	11.1	11.9	11.2		11.9
RBC		3.89			4.06	4.6	4.1	4.02		4.2
WBC	6600	12000			18500	20500	7600	7700		7400
Lymphocytes		86%			95%	74%	77%	74%		61%
Brucella agg		neg.								
Heterophile		1:448								neg.
GB absorption		1:224								
Beef cell abs		neg.								
Bilirubinemia		ind. 60								normal
Coombs		neg.								
NPN				30						
Thymol turb		6.3U								
Urine										
pH	5	ac	ac		ac	ac	ac		ac	
S.G	1.013				1.011	1.013	1.006		1.019	
Sugar	0	0			0	0	0		0	
Alb	tr	tr			+	++	0		tr	
Bile	0	0								
Hemoglobin	+	+			+	+			0	
WBC	4-6	0	0		0	0	Occ		10-15	
RBC	0	8-10	15-20		4-6	3-5	0		0	
Casts	0	0	0		0	0	0		0	
Color	Brown	Brown	Yellow		Yellow	Yellow	Yellow		Yellow	
Porph		neg.								

constellation of signs and symptoms, and that the variable nature of the disease is exhibited in the manifestations that occur *in addition to*, rather than in place of, the basic complex.

Nearly all patients have either the pharyngeal or the typhoidal form, and all of them exhibit a significant degree of lymphadenopathy. This concept is compatible with the findings of Bernstein[16] in the extensive review he made of this disease in 1940. In any case, positive diagnosis at present must rest on the laboratory demonstration of the heterophile antibody and the absorption pattern characteristic of the disease.[2,8] Leibowitz[17] has pointed out that there are a wide variety of diseases that can give high titers of heterophile antibody, and he recommends absorption tests routinely for titers of 1:896 or lower and for all cases in which serum sickness cannot be ruled out by other means. The abnormal lymphocyte, of course, must be included in the basic complex, but since it is found in other diseases and since its recognition depends upon the experience of the individual who reads the blood smear, it cannot be considered an absolutely reliable criterion.

A study of Table 2 will reveal that only five of the cases can be accepted as providing both clinical and laboratory proof for the diagnosis of infectious mononucleosis: Huntington,[8] Hall and Archer,[10] Appelman and Morrison,*[3] Appelman and Gordon,*[11] and the present case. Four cases provide

* Appelman and Morrison[3] first reported a case in 1949. In 1954, Appelman and Gordon[11] reviewed that same case but added a report of a second case. To avoid confusion, I have used the second authors' names.

TABLE 2

	Dameshek[1]	Ellis et al.[2]	Morrison[3]	Wilson et al.[4]	Sawitsky et al.[5]	Small[6]	Berte[7]	Huntington[8]	Mermann[9]	Hall[10]	Gordon[11]	Present case
Malaise	yes		yes		yes	yes	yes	yes		yes	yes	yes
Sore Throat	yes					no					yes	no
Cervical Adenitis	yes	one only	yes	yes	yes	no	no	yes	yes	yes	yes	yes
Chills		no		yes			yes					
Cough		yes				no	yes		yes			
Sore Eyes								yes				
Sore Neck												yes
Generalized Adenopathy	yes	no		yes	yes				yes	yes		yes
Throat Red	yes	no	yes		yes		no				yes	yes
Splenomegaly	yes	yes	yes	yes	yes	no	no	?	yes	yes		yes
Stomatitis	yes	no			no		no				yes	
Rash	yes											yes
Eye Signs					no			yes				
Hepatomegaly		yes		yes	yes	no	no	?	yes	yes		yes
Jaundice	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	yes
Fever	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes
Headache	yes	yes		yes					yes	yes		
Abdominal Pain		yes			yes					yes		yes
Abnormal Lymphocytes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Heterophile Antibody	1/1024	1/1024	1/512	1/896	1/512	1/896	1/224	1/1792	1/1792	1/1792	1/2048	1/448
Guinea Pig Absorption			yes			1/896	1/224	1/896		1/1792	yes	1/224

acceptable clinical proof, but the physicians reporting have failed to give the results of absorption tests: Dameshek,[1] Wilson *et al.*,[4] Sawitsky and Papps,[5] and Mermann.[9] The cases reported by Berte[7] and by Small and Hadley[6] have adequate laboratory proof of diagnosis, yet certainly they do not fit into the basic pattern that has previously been discussed. The case reported by Ellis *et al.*[2] cannot be accepted as providing adequate proof of diagnosis, and, indeed, the authors themselves expressed doubt about it.

Table 3 is a similar listing of the various findings necessary to the establishment of the diagnosis of acute hemolytic anemia. Essentially, the diagnosis

TABLE 3

	Dameshek[1]	*Ellis et al.*[2]	*Morrison*[3]	*Wilson et al.*[4]	*Sawitsky et al.*[5]	*Small*[6]	*Berte*[7]	*Huntington*[8]	*Mermann*[9]	*Hall*[10]	*Gordon*[11]	*Present case*
Temporary anemia of sudden onset	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
High Retics	yes	yes	yes	yes	yes	yes			yes ?		yes	
Nucleated RBC		no	yes		yes	yes	yes		yes		no	no
Anisocytosis		no	yes	yes			yes				no	no
Bone Marrow compatible with hemolytic anemia			yes	yes	yes	yes	yes		yes	yes	yes	
Hemoglobinuria	no	yes	no				no					yes
Indirect Bilirubinemia	yes		yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Urobilinuria	yes	yes	yes	yes	yes		yes			yes ?		
Spherocytes	yes	no	yes	yes	yes	no	no					no

rests on a demonstration of an anemia of fairly rapid onset, associated with evidence of red cell destruction and delivery of young erythrocytic forms into the peripheral blood. Of course the clinical picture depends upon the severity and the duration of the hemolytic process and also upon the site of the hemolysis.[23] It can readily be seen that all of the reported cases provide adequate evidence of hemolytic process. In two cases, Ellis *et al.* and my own, the hemolytic process was sufficiently rapid to produce hemoglobinuria.

Attempting to rule out all other causes of hemolytic anemia on the basis of the information contained in the case reports as published is difficult, and in consequence one must rely to a large extent upon the judgments of the respective authors. In some cases certain conditions were specifically ruled out by appropriate tests, and in others the subsequent course eliminated some possibilities. Table 4 is a listing of the various causes of hemolytic anemia, and the cases are marked accordingly. As is evident, there are a number of "possibilities," although the majority of them are certainly unlikely. The case reported by Ellis *et al.*[2] could fit fairly well into the condition known as paroxysmal cold hemoglobinuria. The possible relationship of drugs will be discussed later. The term *autoimmune hemolytic anemia* designates those cases of acute hemolytic anemia of unknown

TABLE 4

	Dameshek[1]	*Ellis et al.*[2]	*Morrison*[3]	*Wilson et al.*[4]	*Sawitsky et al.*[5]	*Small*[6]	*Berte*[7]	*Huntington*[8]	*Mermann*[9]	*Hall*[10]	*Gordon*[11]	*Present case*
Familial Spherocytosis									±			
Familial Leptocytosis												
Familial Non-spherocytosis										±		
Sickle Cell Anemia												
Paroxysmal Cold Hemoglobinuria		+				±			±		±	
Paroxysmal Nocturnal Hemoglobinuria		±		±	±	±		±	±		±	
March Hemoglobinuria												
Transfusion Reactions												
Hodgkin's Disease												
Lymphatic Leukemia												
Lymphosarcoma												
Disseminated Lupus	±	±	±	±	±	±	±	±	±	±	±	±
Carcinomatosis												
Dermoid Cyst												
Liver Disease												
Malaria												
Bartenella												
Septicemia												
Chemical Agents		A		±	±		B	±	±	C		D E
Burns												
Fava Bean												
Caster Bean												
Snake Venoms												
Auto-Immune	±	±	±	±	±	±	±	±	±	±	±	±
Hypersplenism	±	±	±	±	±	±	±	±	±	±	±	±

A. sulfadiazine. B. Pranone. C. antihistamine. D. Aureomycin & penicillin. E. Achromycin.

etiology in which autoagglutinins or autohemolysins can be demonstrated. *Hypersplenism,* of course, refers to the concept developed by Doan[18] and others[19] in which abnormal splenic mechanisms initiate the hemolytic anemia.

Table 5 indicates the various serologic studies carried out by the various authors in their attempts to identify the mechanism responsible for the hemolysis. A variety of results were obtained. Because in the present case, the tests—excepting for the Coombs one—were performed two months after the onset of the disease, the negative values obtained cannot be given much weight. Several of the authors noted the rapid disappearance of the antibodies during the convalescent period. There appears to be no consistent pattern, excepting in that autoagglutinins were found whenever they were looked for. The RBC fragility test findings varied from increased fragility to decreased fragility, but most of them ranged pretty close to normal. Belk's case[20] was added to the series for interest, although it apparently was not one of hemolytic anemia. Belk studied a patient with infectious mononucleosis solely from the standpoint of the serologic reactions. In addition to the findings noted in the chart, he found a number of heteroagglutinins.

In all but six instances, the treatment that these patients received was essentially symptomatic. Hall and Archer[10] gave cortisone, Appelman and Gordon[11] and Huntington[8] gave adrenocorticotrophic

TABLE 5

	Dameshek[1]	*Ellis et al.*[2]	*Morrison*[3]	*Wilson et al.*[4]	*Sawitsky et al.*[5]	*Small*[6]	*Berte*[7]	*Huntington*[8]	*Mermann*[9]	*Hall*[10]	*Gordon*[11]	*Present case*	*Belk*[20]
Sickling				no	no								
Donath-Landsteiner		yes	no		no					no			
Coombs					4+			4+		yes	no	no	
Ham Horack			no							no		no	
RBC Fragility	.72	nor	.48	.45	nor	nor	nor	nor		nor	nor	.38	
	.24		.42	.32								.28	
Incubated RBC Frag.												.38	
												.28	
Autoagglutinins													
37° C.	no							no				no	
22° C.	yes							no				no	no
3° C.	yes							yes				no	yes
Autohemolysins	no									no			no
37° C.								yes				no	
22° C.							yes	yes				no	
3° C.								yes				no	
Isoagglutinins													
37° C.	no	yes			no			no				no	yes
22° C.	yes	yes						no				no	yes
3° C.	yes	yes	no		no		no	yes	yes	yes		no	yes
Isohemolysins	no									no			
37° C.								yes				no	
22° C.								yes				no	
3° C.								yes				no	

hormone, with good results. The cases described by Berte[7] and by Appelman and Gordon[11] both required blood transfusions. Wilson, Ward and Gray[4] performed a splenectomy upon their patient, and the operation was followed by a rapid and uneventful recovery.

MECHANISM OF HEMOLYSIS

The mechanism of the hemolysis has not been clarified very much by the immunologic studies that have been done to date, but one can say that a variety of antibodies have been demonstrated which could play a part in the destruction of red cells. It has been known for some time that a variety of antibodies can be found in infectious mononucleosis. Belk's paper[20] was written in 1935. Bernstein[16] made quite a point of the false positive Wasserman, typhoid, paratyphoid and brucella agglutinations, and even suggested that a positive Widal test in the absence of bacteriologic proof should prompt a search for infectious mononucleosis. He agreed with Belk that infectious mononucleosis apparently causes release of a variety of antibodies depending on the previous exposure of the patient to antigenic agents. This concept gains some support from the electrophoretic studies of Sterling,[21] who found a regular increase in gamma globulin and a less regular and less pronounced increase in alpha$_1$ and beta globulin. Enders[22] found that different antibodies reside in different globulin fractions, e.g., isoagglutinins are found in the beta fraction. Sterling[21] found the heterophile antibody occurred predominantly in the gamma globulin fraction, but was not necessarily limited to it. Therefore it is not surprising that the cases on which I have been commenting indicated various agglutinins and hemolysins, and one wonders why this shower of antibodies suddenly started producing hemolysis, or, conversely, whether these antibodies have anything at all to do with the hemolytic process.

Hall and Archer[10] discuss three possibilities as regards the cause of hemolysis. First, they mention direct action of a virus in causing hemagglutination. It has been demonstrated *in vitro* for some viruses,[30] but not, of course, for infectious mononucleosis, since no virus has been isolated. Another possibility, hypersplenism, seems quite plausible, except for the fact that hemoglobinuria occurred in my case, a circumstance which strongly suggests an intravascular hemolytic process, as opposed to the extravascular one which is thought to occur in hypersplenism.[23] The case presented by Wilson *et al.* seems definitely to support the theory of hypersplenism, since it responded rapidly to splenectomy.

The third possible cause of hemolysis suggested by Hall and Archer is the production of hemolytic immune bodies. That hypothesis is supported by the response of several of the cases to steroid hormones and also by the one proved case of hemoglobinuria.

Still another possibility which must be considered is the influence of drugs. It will be noted in Table 4 that in only two of the proved cases were drugs withheld, and in four of the cases no mention was made of the use of drugs. The remaining five patients had sulfadiazine, Pranone, antihistamine, Aureomycin, penicillin and Achromycin. Dameshek's case[1] was reported as hemolytic anemia due to sulfadiazine. The other drugs are certainly not noted for producing hemolytic anemia and must therefore act (if they act at all) by some indirect means. Such a mechanism has recently

been demonstrated by Harris[24] with Faudin. He found a patient to possess strong hemagglutinin which acted only in the presence of Faudin, neither one being capable by itself of producing agglutination. It is also known that certain colored people carry an inborn red-cell defect that causes hemolysis of their red cells when exposed to Primaquine.[25] Still another possible mechanism in which drugs might have a part is a hapten-cell combination which becomes antigenic and capable of stimulating the production of a specific antibody.[26] This has been demonstrated in the quinidine-induced thrombocytopenic purpura. An attempt was made to demonstrate some such effect with Achromycin in the case reported in this paper, but no evidence of hemolysis or agglutination could be found. This failure could have been the result of the delay in testing, but in any case, a direct toxic reaction was ruled out.

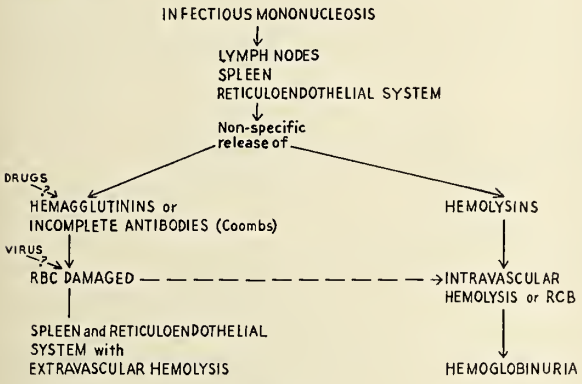


Figure 1

Of the several possible mechanisms now known, no single one appears to be any more likely than another. A schematic representation of these various mechanisms is to be found in Figure 1. On the basis of the information obtained thus far, it would seem that several pathways are open, and the one that hemolysis or agglutination takes in a given patient depends upon the particular antibodies released in him.

INCREASED INCIDENCE

It is interesting to speculate about why hemolytic anemia in such a benign form has become relatively frequent in the past 15 years. In Bernstein's extensive review of infectious mononucleosis[16] in 1940, no cases were mentioned; indeed Bernstein considered anemia of any type a rarity. In 1945, Read and Helwig[27] found only six cases of anemia among 300 cases of infectious mononucleosis, and apparently none of them were of the hemolytic type. It seems unlikely that it was just unrecognized prior to 1940, since when it occurs it nearly always presents a dramatic and obvious appearance. It is of course possible that the etiologic agent has changed its characteristics and has started to affect the erythrocytic series as well as the lymphocytes, but proof will have to await positive identification of the etiologic agent or agents.

On the other hand, the host may have changed, in that for some reason the human species is being exposed more often to antigenic agents which cause production of antibodies capable of producing hemolysis but tending to lie dormant until released in excessive amounts by the non-specific stimulation of infectious mononucleosis. This change in incidence happens to coincide with the advent of potent antibiotic agents, and one is tempted to blame it, somehow, on the free use of these drugs. The laboratory confirmation of the diagnosis of infectious mononucleosis may take several days, and few practicing physicians have the courage to allow a youngster to run a high temperature for so long a time without trying one or more of the various drugs that are available.

It is obvious that more study of these problems is required, and their solution probably must await more basic advances in the larger field of immunology.

SUMMARY AND CONCLUSIONS

1. Another case of acute hemolytic anemia in infectious mononucleosis is reported, one which is thought to be the first proved case that developed hemoglobinuria.

2. All previously reported cases are reviewed. Although several of them fail to satisfy the criteria completely, it is felt that hemolytic anemia unquestionably does occur in infectious mononucleosis and, further, that it is increasing in frequency.

3. Most of these patients required no special treatment, but some responded well to the steroid hormones, and one recovered promptly after splenectomy without a trial of hormones.

4. The possible mechanisms of hemolysis are discussed, and a schematic representation of them is offered. It seems that they may very well differ from patient to patient, depending upon the individual's previous exposure to antigenic agents.

5. The cause of the increase in frequency of this situation is discussed, and although a great deal of work is needed before antibiotics can be pointed out as the cause, it is felt that they may be to blame.

Dr. Kirkham wishes to thank St. Joseph Mercy Hospital, Mason City, and George T. Joyce, M.D., for providing the necessary materials and facilities for special tests, and he also wishes to thank Miss Marie Von Kano, laboratory technician, for her invaluable assistance.

BIBLIOGRAPHY

1. Dameshek, W.: Cold hemagglutinins in acute hemolytic reactions in association with sulfonamide medication and infection. J.A.M.A., **123**:77-80, (Sept. 11) 1943.

2. Ellis, L. B., Wollenman, O. J., and Stetson, R. P.: Autohemagglutinins and hemolysins with hemoglobinuria and acute hemolytic anemia in an illness resembling infectious mononucleosis. Blood, **3**:419-430, (Apr.) 1948.

3. Appelman, D. H., and Morrison, M. M.: Concomitant infectious mononucleosis and hemolytic icterus. Blood, **4**:186-188, (Feb.) 1949.

4. Wilson, S. J., Ward, C. E., and Gray, L. W.: Infectious lymphadenosis (mononucleosis) and hemolytic anemia in negro; recovery following splenectomy. Blood, **4**:189-192, (Feb.) 1949.
5. Sawitsky, A., Papps, J. P., and Wiener, L. M.: Demonstration of antibody in acute hemolytic anemia complicating infectious mononucleosis. Am. J. Med., **8**:260-262, (Feb.) 1950.
6. Small, C. S., and Hadley, G. G.: Acute hemolytic anemia complicating infectious mononucleosis. Am. J. Clin. Path., **20**:1056, (Nov.) 1950.
7. Berte, S. J.: Acute hemolytic anemia in infectious mononucleosis. New York J. Med., **51**:781-782, (Mar. 15) 1951.
8. Huntington, P. W., Jr.: Hemolytic anemia in infectious mononucleosis. Delaware M. J., **23**:165-167, (July) 1951.
9. Mermann, A. C.: Acute hemolytic anemia with infectious mononucleosis. U. S. Armed Forces M. J., **3**:1551-1553, (Oct.) 1952.
10. Hall, B. D., and Archer, F. C.: Acute hemolytic anemia associated with infectious mononucleosis. New England J. Med., **249**:973-976, (Dec. 10) 1953.
11. Appelman, D. H., and Gordon, G. B.: Acute hemolytic anemia complicating infectious mononucleosis: report of 2 cases. Ann. Int. Med., **41**:371-376, (Aug.) 1954.
12. Wasserman, L. R., Stats, D., Schwartz, L., and Fudenberg, H.: Symptomatic and hemopathic hemolytic anemia. Am. J. Med., **18**:961-989, (June) 1955.
13. Harrison, T. R.: Principles of Internal Medicine, Second Edition. The Blakiston Company, 1954, p. 1313.
14. *Ibid.*, p. 1278 (3. Serologic Tests).
15. Hoagland, R. J.: Infectious mononucleosis. Am. J. Med., **13**:158-171, (Aug.) 1952.
16. Bernstein, A.: Infectious mononucleosis. Medicine, **19**: 85-159, (Feb.) 1940.
17. Leibowitz, S.: Infectious mononucleosis; value of differential absorption tests in its serologic diagnosis. Am. J. Med., **13**:172-182, (Aug.) 1952.
18. Doan, C. A.: Hypersplenism. Bull. New York Acad. Med., **25**:625-650, (Oct.) 1949.
19. Dameshek, W., and Estren, S.: The Spleen and Hypersplenism. New York, Grune and Stratton, 1947.
20. Belk, W. P.: Minor hemagglutinins; study of single human blood containing autoagglutinins, heteroagglutinins and hemolysins, and rouleau-forming substance. J. Lab. & Clin. Med., **20**:1035-1042, (July) 1935.
21. Sterling, K.: Serum proteins in infectious mononucleosis. Electrophoretic studies. J. Clin. Investigation, **28**: 1057-1066, (Sept. pt. 2) 1949.
22. Enders, J. F.: Concentrations of certain antibodies in globulin fractions derived from human blood plasma. J. Clin. Investigation, **23**:510-530, (July) 1944.
23. Ham, T. H.: Hemoglobinuria. Am. J. Med., **18**:990-1006, (June) 1955.
24. Harris, J. W.: Studies on mechanism of drug-induced hemolytic anemia (Abstract). J. Lab. & Clin. Med., **44**:809-810, (Nov.) 1954.
25. Dameshek, W.: Hemolytic anemia. Am. J. Med., **18**: 315-325, (Feb.) 1955.
26. Dameshek, W.: Hemotoxic reactions to drugs. Postgrad. Med., **16**:369-380, (Nov.) 1954.
27. Read, J. T., and Helwig, F. C.: Infectious mononucleosis. Analysis of 300 cases with 3 characterized by rare hematologic features. A.M.A. Arch. Int. Med., **75**:376-380, (June) 1945.
28. Davidsohn, I.: Serologic diagnosis of infectious mononucleosis. J.A.M.A., **108**:289-295, (Jan. 23) 1937.
29. Neber, J., and Dameshek, W.: Improved demonstration of circulating antibodies in hemolytic anemia by use of bovine albumin medium. Blood, **2**:371-380, (July) 1947.
30. Moolten, S. E., and Clark, E.: Viremia in acute hemolytic anemia and in autohemagglutination; report of case and review of literature, with special reference to virus of Newcastle disease. A.M.A. Arch. Int. Med., **89**:270-292, (Feb.) 1952.

Program for Washington County Cardiac Farmers

A project set up on September 1 and sponsored by grants by the American and Iowa Heart Associations is designed to help farmers in Washington County, Iowa, who suffer from any of a variety of heart ailments. It is designed as a pilot program, and if successful it will be copied throughout the nation.

Its objectives will be to determine the physical capacity of farmers who have such difficulties and to help them, through medical and social counseling, to remain active within their physical limitations—either in or outside of agriculture. Dr. L. E. January, professor of internal medicine at the State University of Iowa and chairman of the Iowa Heart Association's Cardiac-in-agriculture Committee, will be the responsible investigator, and the work will occupy at least one year.

Members other than Dr. January on the planning and supervising committee are Herbert Howell, extension specialist in farm mangament at Iowa State College; Dr. A. G. Felter, of Van Meter, representing the Iowa State Medical Society; H. L. Benshoof, director of the Division of Vocational Rehabilitation of the State Department of Public Instruction; and Guy Gilchrist, director of research for the Iowa Farm Bureau Federation. A liaison committee of the Washington County Medical Society consists of Drs. G. E. Montgomery, of Washington, Jay Miller, of Wellman, and D. G. Sattler, of Kalona. The program will be conducted by a local steering committee, the local physicians and a "clinic team," of which Dr. Montgomery is chairman.

It is anticipated that most of the patients will be suffering from coronary, hypertensive, rheumatic or congenital heart disease. Each must be at least 16 years old and must be employed in agriculture. Each will undergo a complete medical examination at the SUI Medical Center; the rehabilitation counsellor will then study his economic status, skills, training, experience, employment history and motivations; and the county extension director will study his farm operation. The team will then meet with the patient's family and with his family physician to discuss the various aspects of his problem and to agree upon a plan for making the most of his potentialities. If all medical, social and occupational indications are that the patient can continue farming with certain modifications in his work procedure, he will be given counselling from the county agricultural extension service on the simplification procedures that are necessary. If the clinic is agreed that he cannot safely continue in agriculture, the patient will be referred to the Division of Vocational Rehabilitation for counselling and training in another occupation. In either case, the team will conduct follow-up studies and make reports to his family physician.

Whenever possible, the team will try to help each patient remain in farming.

A somewhat similar cardiac-in-industry program preceded this one that is being set up for farmers with heart weaknesses.

Coming Meetings

In State

Oct. 10-11	**Fourth Annual Conference,** Institute of Gerontology. Iowa City
Oct. 12	**Thyroid Diseases.** SUI College of Medicine, Iowa City
Oct. 13-14	**Joint Meeting, Mississippi Valley and Iowa Trudeau Societies,** Des Moines
Oct. 23	**Iowa State Medical Society's County Presidents' and Secretaries' Conference.** Savery Hotel, Des Moines.
Oct. 26	**Open Meeting, Governor's Conference on Children and Youth.** Memorial Union, Iowa State College, Ames.
Oct. 28	**Dermatology & Syphilology.** SUI College of Medicine, Iowa City
Nov. 4-5	**Obstetrics & Gynecology.** SUI College of Medicine, Iowa City
Nov. 17	**Hematology.** SUI College of Medicine, Iowa City

Out of State

Oct. 1	**California Society of Internal Medicine.** Biltmore Hotel, Santa Barbara
Oct. 1-6	**American Academy of Pediatrics.** Palmer House, Chicago
Oct. 3-5	**Minor Surgery.** New York University, NYC
Oct. 3-6	**Fall Clinical Conference, Kansas City-Southwest Clinical Society.** Municipal Auditorium, Kansas City, Missouri
Oct. 3-7	**Intravertebral Disk.** New York University, NYC
Oct. 3-7	**Internal Medicine.** New England Center Hospital, Boston
Oct. 3-7	**Postgraduate Course in Chest Diseases.** Am. Coll. Chest Physicians, Hotel Knickerbocker, Chicago
Oct. 3-7	**Thoracic Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 3-8	**Gynecology & Endocrinology.** New York University, NYC
Oct. 3-14	**General Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 3-14	**Radiology.** Cook Co. Grad. Sch. Med., Chicago
Oct. 5	**Arthritis and Rheumatism Foundation.** Henry Ford Hospital, Detroit
Oct. 5	**Midwest Conference on Rheumatic Diseases.** Ford Hospital, Detroit
Oct. 5-7	**San Francisco Heart Assn.,** 26th annual symposium on heart disease. St. Francis Hotel, San Francisco
Oct. 6	**"Medicine for Today"** (12 wks., 2 hrs. per wk.). Public Hospital, Moline, Illinois
Oct. 6-8	**Academy of Psychosomatic Medicine,** 2nd annual meeting. Plaza Hotel, New York City
Oct. 6-8	**Clinical Chemistry for Physicians.** Ctr. for Contin. Study, U. of Minn., Minneapolis
Oct. 7-8	**Pulmonary Diseases for General Practitioners.** Ohio State University Coll. of Med., Columbus
Oct. 7-11	**Hematology.** New York University, NYC
Oct. 8	**AMA Legislative Conference.** Chicago
Oct. 9	**AMA Medicolegal Symposium.** Chicago
Oct. 9-12	**California Academy of General Practice,** Sheraton Palace Hotel, San Francisco
Oct. 10-11	**Ophthalmology.** State University of New York, Syracuse
Oct. 10-12	**Clinical Electrocardiography.** U. of Colo. Med. Ctr., Denver
Oct. 10-12	**Diabetes and Endocrinology in Relation to General Medicine.** New England Deaconess Hospital, Boston
Oct. 10-14	**Dermatology & Syphilology for Pediatricians.** New York University, NYC
Oct. 10-14	**Esophageal Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-14	**Occupational Skin Problems,** University of Cincinnati
Oct. 10-14	**Pediatric Cardiology.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-14	**Surgery.** University of Oregon, Portland
Oct. 10-21	**Clinical Uses of Radiosotopes.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	**Electrocardiography and Heart Disease.** Cook County Grad. Sch. of Med., Chicago
Oct. 10-21	**Surgical Technic.** Cook County Grad. Sch. Med., Chicago
Oct. 10-21	**Urology.** Cook County Graduate School of Medicine, Chicago
Oct. 10-21	**New York Academy of Medicine,** 28th graduate fortnight. "Problems of Aging," New York City
Oct. 10-28	**Cerebral Palsy.** Columbia-Presbyterian Medical Center, NYC
Oct. 10-Nov. 4	**Surgical Technic, Surgical Anatomy & Clin. Surgery.** Cook County Grad. Sch. Med., Chicago
Oct. 11	**San Diego County Heart Assn.,** annual symposium on heart disease. U. S. Naval Hosp., Balboa Park, San Diego
Oct. 12-13	**Los Angeles County Heart Assn.,** 25th annual symposium on cardiovascular diseases. Wilshire-Ebell Theater, Los Angeles
Oct. 12-14	**AMA Conference on Physicians and Schools.** Hotel Moraine, Highland Park, Ill.
Oct. 13-15	**Congenital Heart Malformation.** Cook County Graduate School of Medicine, Chicago
Oct. 13-15	**Fourth Western Cardiology Conf.** U. of Colo. Med. Ctr., Denver
Oct. 15	**Wisconsin Society of Obstetrics & Gynecology.** Sheboygan. (GP's invited)
Oct. 15	**AMA Legislative Conference.** Omaha
Oct. 16	**AMA Medicolegal Symposium.** Omaha
Oct. 17-19	**Conference on Applied Therapeutics.** U. of Calif., San Francisco
Oct. 17-21	**General Surgery.** Cook Co. Grad. Sch. Med., Chicago
Oct. 17-21	**Pediatric Cardiology.** Cook County Grad. Sch. of Med., Chicago
Oct. 17-21	**Pediatrics.** Knickerbocker Hotel, Chicago
Oct. 17-21	**Rheumatic & Congenital Heart Disease.** Cook County Graduate School of Medicine, Chicago
Oct. 17-21	**Clinical Bronchoscopy.** Cook County Graduate School of Medicine, Chicago
Oct. 17-21	**Electrocardiography for Anesthesiologists.** New York University, NYC
Oct. 17-21	**Rehabilitation of Children.** New York University, NYC
Oct. 17-21	**Surgery of Colon and Rectum.** Cook County Grad. Sch. Med., Chicago
Oct. 17-22	**Acute Neurological Problems in General Practice.** New York University, NYC
Oct. 17-22	**Internal Medicine.** University of Michigan, Ann Arbor
Oct. 17-22	**Radiology of the Chest.** Mt. Sinai Hospital, NYC
Oct. 17-28	**Fractures and Traumatic Surgery.** Cook County Grad. Sch. of Med., Chicago
Oct. 17-28	**Dermatology.** Cook County Graduate School of Medicine, Chicago
Oct. 17-Nov. 11	**Radioisotopes.** Oak Ridge, Tennessee
Oct. 17-Nov. 11	**Surgical Technic, Surgical Anatomy and Clinical Surgery.** Cook Co. Grad. Sch. Med., Chicago
Oct. 19	**Minnesota AGP Annual Fall Refresher.** Radisson Hotel, Minneapolis
Oct. 20-21	**Diabetes.** Princess Issena Hotel, Daytona Beach, Florida
Oct. 20-22	**Anesthesiology.** Duke University, Durham, North Carolina
Oct. 20-22	**Fractures and Joint Injuries.** U. of Colo. Med. Ctr., Denver
Oct. 20-Nov. 4	**American College of Surgeons,** annual meeting. Chicago
Oct. 20-21	**Techniques in General Practice.** Ctr. for Continuation Study, U. of Minnesota, Minneapolis
Oct. 20-21	**Conference on Obstetrics & Gynecology.** U. of Calif., San Francisco
Oct. 22-26	**American Heart Assn.,** scientific session. New Orleans
Oct. 24	**Gallbladder Surgery,** 10 hrs. Cook Co. Grad. Sch. Med., Chicago

(Continued on the following page)

Coming Meetings

(Continued from page 531)

Oct. 24-26	**American College of Gastroenterology,** annual convention. Shoreland Hotel, Chicago
Oct. 24-27	**Annual Assembly of the Omaha-Midwest Clinical Society.** Hotel Paxton, Omaha
Oct. 24-27	**Oklahoma City Clinical Society.** Biltmore Hotel, Oklahoma City
Oct. 24-28	**Breast and Thyroid Surgery.** Cook County Graduate School of Medicine, Chicago
Oct. 24-28	**Gynecology and Obstetrics.** Knickerbocker Hotel, Chicago
Oct. 24-28	**Fractures and Other Traumatic Conditions.** Massachusetts General Hospital, Boston
Oct. 24-28	**Recent Developments in Psychiatry for the Internist** (Amer. Coll. of Physicians Course). Topeka, Kansas
Oct. 24-29	**Surgery of the Eye.** New York University, NYC
Oct. 24-Nov. 4	**Cystoscopy.** Cook County Graduate School of Medicine, Chicago
Oct. 24-Nov. 4	**Bronchoesophagoscopy.** University of Illinois, Chicago
Oct. 24-Nov. 4	**Gastroenterology.** Cook County Grad. Sch. of Med., Chicago
Oct. 24-Nov. 4	**Surgical Anatomy & Clinical Surgery.** Cook County Grad. Sch. Med., Chicago
Oct. 26-27	**Annual Meeting of the Missouri Academy of General Practice.** Jefferson City
Oct. 26-27	**Gastroenterology.** Cleveland Clinic & Bunts Institute, Cleveland
Oct. 27-28	**Medical Rehabilitation—Home, Office and Hospital Procedures.** N. Y. Medical College, Flower & Fifth Avenues, N. Y. C.
Oct. 27-29	**Postgraduate Gastroenterology** (Am. Col. Gastroenterology). Chicago
Oct. 30	**AMA Medicolegal Symposium,** New York City
Oct. 31-Nov. 2	**Auscultation of the Heart.** New York University, NYC
Oct. 31-Nov. 4	**Rheumatic Diseases.** Cornell University, NYC
Oct. 31-Nov. 4	**American College of Surgeons.** Chicago
Oct. 31-Nov. 4	**Medical Aspects of (Industrial) Compensation.** New York University, NYC
Nov. 1-3	**International Symposium on Enzymes.** Henry Ford Hospital, Detroit
Nov. 3	**Clay County (Missouri) Annual Clinical Conference.** Excelsior Springs
Nov. 3-4	**Cardiac Roentgenology.** New York University, NYC
Nov. 6-13	**Second International College of Allergology.** Rio de Janeiro, Brazil
Nov. 7	**Gastroscopy—40 hour course.** Cook County Graduate School of Medicine, Chicago
Nov. 7-9	**Assn. of Military Surgeons,** annual convention. Statler Hotel, Washington, D. C.
Nov. 7-9	**Gynecology.** U. of Kansas Medical Center, Kansas City, Kansas
Nov. 7-9	**Clinical Pharmacology and Therapeutics.** U. of Colo. Med. Ctr., Denver
Nov. 7-9	**Pediatrics.** University of Texas, Dallas
Nov. 7-11	**Lead Problems in Industry.** Kettering Laboratory, University of Cincinnati
Nov. 7-11	**Vaginal Approach to Pelvic Surgery.** Cook County Grad. Sch. of Med., Chicago
Nov. 7-11	**Spacial Vectorcardiography.** Mt. Sinai Hospital, NYC
Nov. 7-11	**Arthritis and Allied Rheumatic Disorders.** New York University, NYC
Nov. 7-12	**Electrocardiography.** Mt. Sinai Hospital, Miami Beach, Florida
Nov. 7-12	**Radiology for Radiologists.** U. of Minnesota, Minneapolis
Nov. 7-18	**General & Surgical Obstetrics.** Cook County Grad. Sch. Med., Chicago
Nov. 7-18	**Endaural Surgery.** New York University, NYC
Nov. 7-18	**Cytoscopy.** Cook County Graduate School of Medicine, Chicago
Nov. 7-18	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
Nov. 9-10	**Surgery.** Bunts Institute, 2020 E. 93rd Street, Cleveland
Nov. 9-10	**Annual Fall Postgraduate Clinic.** Sheraton Cadillac Hotel, Detroit
Nov. 10-11	**Missouri Heart Association Postgraduate Course.** Camdenton
Nov. 10-12	**Electrolyte and Fluid Balance.** U. of Colo. Med. Ctr., Denver
Nov. 10-12	**American College of Cardiology, Fourth Interim Meeting.** Hotel Claridge, Memphis
Nov. 11	**Cardiac Arrest and Resuscitation.** New York University, NYC
Nov. 11-12	**Inter-Society Cytology Council,** annual meeting. Statler Hotel, Cleveland
Nov. 13-14	**Postgraduate Refresher Course.** University of Toronto
Nov. 14-15	**Office Proctology.** Mt. Sinai Hospital, NYC
Nov. 14-16	**Bacteriology and Blood Bank Technics for Medical Technologists.** Continuation Study Ctr., U. of Minnesota, Minneapolis
Nov. 14-16	**Diabetes.** New York University, NYC
Nov. 14-17	**Congenital Heart Disease.** Johns Hopkins Hospital, Baltimore
Nov. 14-17	**Internal Medicine.** U. of Kansas Medical Center, Kansas City, Kansas
Nov. 14-17	**Interstate Postgraduate Medical Association,** scientific assembly. Milwaukee
Nov. 14-18	**Postgraduate Course in Chest Diseases.** Am. Coll. Chest Physicians. Hotel Park-Sheraton, New York City
Nov. 14-18	**Am. Public Health Assn.,** annual meeting. Municipal auditorium, Kansas City, Missouri
Nov. 14-18	**Cancer.** Columbia-Presbyterian Medical Center, NYC
Nov. 14-18	**Internal Medicine.** University of Washington, Seattle
Nov. 14-18	**Forensic Pathology.** Walter Reed Hospital, Washington, D. C.
Nov. 14-18	**Neuropsychiatric Aspects of Internal Medicine.** University of Wisconsin, Madison
Nov. 14-18	**Electrocardiography.** New York University, NYC
Nov. 14-25	**Lab. Diagnosis of T-B for Lab. Personnel.** (Also open to senior staff members and lab. directors.) USPHS, Chamblee, Georgia
Nov. 16-18	**Refresher Course in General Practice.** Vancouver General Hospital, Vancouver, B. C.
Nov. 17-18	**X-ray in Pulmonary and Urologic Diseases.** Tulane University, New Orleans
Nov. 18	**Arterial Grafting.** Academy of Medicine of Cleveland and Cuyahoga County, 2009 Adelbert Road, Cleveland
Nov. 19-21	**Am. Assoc. Blood Banks.** Palmer House, Chicago
Nov. 21	**Medical Problem of the Problem Drinker.** Academy of Medicine of Cleveland and Cuyahoga County, 2009 Adelbert Road, Cleveland
Nov. 21-22	**Fractures for General Physicians. U.** of Minnesota, Minneapolis
Nov. 21-25	**Clinical Bronchoscopy.** Cook County Graduate School of Medicine, Chicago
Nov. 23-Dec. 4	**Postgraduate Medical Cruise.** Duke University, Durham, North Carolina
Nov. 28	**National Medical Public Relations Conference.** Statler Hotel, Boston
Nov. 28-30	**National Soc. for Crippled Chn. & Adults.** Palmer House, Chicago
Nov. 28-Dec. 2	**Electrocardiography.** New England Center Hospital, Boston
Nov. 28-Dec. 2	**Peripheral Vascular Diseases.** New York University, NYC
Nov. 28-Dec. 2	**Surgery of Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 9	**Office & Operative Gynecology.** Cook County Grad. Sch. Med., Chicago
Nov. 28.-Dec. 9	**Gynecology.** Cook County Graduate School of Medicine, Chicago
Nov. 28.-Dec. 9	**Cystoscopy.** Cook County Graduate School of Medicine, Chicago
Nov. 28.-Dec. 9	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 11	**Trauma (Excluding Fractures).** New York University, NYC
Nov. 29-Dec. 2	**Interim Session, AMA.** Boston
Nov. 30-Dec. 1	**Geriatrics.** Hotel Roosevelt, NYC



BUTTONHOLE YOUR SENATOR!

Virtually every one of us has a close relative whose old age has been rendered uncomfortable by the partial or total insolvency of a brotherhood insurance plan or a pension system on which he had relied for his retirement income. There is no doubt of the good intentions with which each of those schemes was originally set up. But the founders either were not particularly good businessmen, or were temporarily unrealistic in forecasting the demands to which the funds would eventually be subjected.

In the federal Social Security System, this nation is preparing the very same sort of heartbreak and discomfort for every single worker now 30 or 35 years of age who is engaged in a "covered" occupation. There isn't any doubt about it. In 1937, there were 160 taxpayers for every potential beneficiary; in 1954, there were 12 taxpayers for each beneficiary; and in 1960, there will be no more than 4 taxpayers for each beneficiary. In the meantime, the longevity of the American people is increasing rapidly. At present, the life expectancy of the average individual when he receives his first retirement check (at age 65) is 153 months. Thus this average man has reason to expect to draw $15,300 from the government, despite the fact that he has paid in only $753. Of course his employer has contributed a like amount in his behalf, but twice $753 is a long way short of $15,300. The situation would be somewhat less dangerous if the government either were either keeping Social Security tax revenue inviolate or were paying interest on the parts of the fund that it uses for other purposes. But it is doing neither.

The worst aspect of the plan is its susceptibility to change. Indeed, there hasn't been and isn't likely to be a session of Congress free from pressures, to say nothing of temptations, to make weakening alterations. In 1935, when the original law was adopted, the tax rate was set at one per cent each for employer and employee, and increases of one per cent each were scheduled at intervals of three years until the tax, for worker and boss alike, reached six per cent. Benefits of $10-25 per month were planned to begin in 1942. But Congress subsequently failed to raise the tax rate until 1950 (when it voted a rise of one-half per cent instead of five per cent), and, in the meantime, it advanced the starting date for benefit payments from 1942 to 1940.

If the first plan had been followed, Social Security taxes would long since have reached the maximum, but they haven't. And though the ceiling on earnings taxable for the purpose has been pushed up from $3,000 to $4,200, the additional revenue does not equal the sum that the increased rate would have produced. Besides, benefits have been increased at least three-fold.

Almost innumerable further changes in the law have been proposed, each of them a means of giving people more and more for practically nothing. Physicians will be virtually unanimous in opposing all of them, but they are particularly concerned about blocking the amendment (House of Representatives File 7,225) that would grant immediate retirement income to the "totally and permanently disabled." It has already passed the House by a vote of 372 to 31, but there is a possibility that a considerably larger proportion of senators can be persuaded to oppose it when it comes before them in January.

We doctors have three principal reasons for urging its defeat. (1) Total and permanent disability is almost never a fact. Instead, it is an opinion that a physician is called upon to give. In almost if not quite a majority of cases, the doctor would be given a choice of helping cheat the government or of incurring the enmity of his patient and his patient's friends. (2) Considerable success is now being achieved in the rehabilitation of badly disabled people. But if they could count on being supported in idleness so long as they remained unable to earn a living, a considerable number of them would cling to their disabilities for dear life. (3) This additional drain upon Social Security funds is no more than one of many. But if physicians can hold the line on this issue, it is barely possible that they, together with other level-headed, thoughtful people, may have greater success in preserving the Social Security system so that, on the one hand, the next generation will not be impoverished by confiscatory taxes designed to finance "pie in the sky," and, on the other hand, the elderly people of forty years hence won't see the retirement income they have planned on disappear into thin air.

JENKINS-KEOUGH CLEARS A HURDLE

While we are talking about proposed federal legislation it is well that we call attention to the fact that the Jenkins-Keough Bill (House of Representatives File 10) was approved on July 19 by the House Ways and Means Committee. The following amendments were agreed upon by that body: (1) The Bill's application is limited to those defined as self-employed in the Social Security law, plus physicians and Christian Science practitioners. (The Social Security Act doesn't mention physicians among the self-employed because it doesn't cover them.) (2) There are now three

alternative forms of investment, rather than two: (a) a restricted retirement annuity fund; (b) a restricted retirement annuity contract; and (c) a life insurance annuity contract, to the extent that the premium is allocated to the annuity (i.e., under the proposed law, a self-employed individual could postpone taxes on the part of his endowment-policy premium that builds up savings, as distinguished from the part that pays for life insurance). (3) The maximum amount that could be excluded during any taxable year was reduced from $7,500 to $5,000, and the lifetime exclusion was reduced from $150,000 to $100,000.

If H.R. 10 becomes law, a physician will be able to set aside either $5,000 per year or 10 per cent of his income, if that amount is greater, to purchase a retirement annuity. That money would be exempt from federal income tax in the year that it was paid as an annuity premium. When the retirement annuity matured, federal income taxes would then be payable on the annual income received from the annuity, but almost certainly at a reduced rate, for the doctor would find himself in a somewhat lower bracket and would be entitled to additional exemptions because he and his wife would then have passed the age of 65.

All Iowa Congressmen and Senators will have an opportunity to vote on H.R. 10.

A HISTORY OF A THREAT

Blessed are the meek, for they shall inherit the earth. Blessed are those who hunger and thirst for righteousness, for they shall be satisfied.

—Matthew 5:5-6

Does the daily badinage between internist and surgeon indicate a mutual irritation—a threat of schism? And does the general practitioner mean at least a part of what he says when he defines an internist as "a physician too awkward to operate, too lazy to do O.B., and unwilling to make house calls"? Is that sort of "needle" a symptom of a widening cleavage between practitioner and specialist? The possibilities of internecine strife should not be shrugged off or completely overlooked. A tumor does not forbear malignant change or growth just because the patient refuses to acknowledge its existence.

It is good for us, occasionally, to take a look at the past so that we can avoid repeating our mistakes. F. H. Garrison's INTRODUCTION TO THE HISTORY OF MEDICINE and K. Walker's STORY OF MEDICINE should serve the purpose.

Throughout the Middle Ages and at the time of the Renaissance, there were three kinds of doctors: the physician, the surgeon and the apothecary. Of these, the physician stood alone as the unquestioned leader of his profession. In France, the three types of doctors were categorized as a *grande bourgeoisie* of physicians, a *petite bourgeoisie* of clerical barber-surgeons and a proletariat of outcast surgeons, the *barbitonsores*. Each of these classes had as little to do with the others as possible.

The French physician of that period has been described as "a sterile pedant and a coxcomb, red-heeled, long-robed, big-wigged, square bonneted, pompous and disdainful in manner, making a vain parade of his Latin."

"Instead of studying his patient carefully," the account continues, "the physician of that period was usually preoccupied with concealing his own ignorance with a clamour of words. He would wrangle for hours about some fantastic theory which had no relationship at all to the question on which a practical decision was urgently needed." There were, of course, able and conscientious men among the physicians, men who were both devoted to their patients and modest as to their knowledge, but such were in the minority.

The barber-surgeons of that period were even less likable characters. William Clowes, Queen Elizabeth's physician, described them as "no better than renegades or vagabonds—shameless in countenance, lewd in disposition, brutish in judgment and understanding." This was undoubtedly true of the men who were known as "cataract-gouchers" and of the lithotomists, as well as of the tooth surgeons who traveled with the country fairs, attracting patients by the power of their voices.

The third class of medical men, the apothecaries, prepared medicines for the physicians, but did not themselves prescribe them. In still earlier times, however, drugs had been supplied by grocers, and it had not been until the apothecaries managed to secure charters for themselves that they eliminated competition from that direction. But this success brought upon them the displeasure of the physicians, who promptly visualized the apothecaries as rivals in the practice of medicine. At a later date, that rivalry actually materialized.

In many ways it was fortunate that the apothecaries did gain power and privilege, for in the London plague of 1663-1666, most of the physicians fled, leaving the apothecaries to give patients what help they could.

Among their other faults, voluntary and otherwise, the apothecaries were exorbitant in their charges. Yet the physicians were at least equally to blame for the prices they exacted for the diverse "medicines" they ransacked from Nature's bounty. Such unpleasant items as the eyes of crabs, the feathers of partridges, live spiders rolled in butter, ants' eggs and specially prepared excrement of dogs were not cheap. And of course powdered human skull and the yet more costly powdered Egyptian mummy were available only to the "carriage trade"—large carriages, at that.

Fortunately, the standings of these three branches of the medical profession were raised, in the course of time, by the granting of royal charters.

From such warring and otherwise disagreeable beginnings, there arose during the Nineteenth Century almost as if by the transmutation of base metal, the triad of physician, surgeon, and general practitioner or family doctor. The great asset of this last member was his acquaintance with the patient. Equipped with that knowledge, he was in position to take a balanced view of the patient's illness and to prescribe appropriate treatment.

Toward the end of that century, scientists began to be hailed as the leaders of thought. The Scientific Age had begun. Then, as scientific discoveries revolutionized industrial methods, the Industrial Age had its start. A third feature of the era was the rapid rise of the Age of Specialization. Whenever knowledge increases beyond a certain point, it becomes impossible for one mind to learn everything, and a division or departmentalization must take place. The process has been particularly rapid in Medicine, for each year we are overwhelmed by advances and consolidations of advances in physics, chemistry, physiology, etc.

The breaking up of medical knowledge into a number of pieces occasions difficulties—specialties within specialties within specialties.

> "Big fleas have little fleas upon
> their backs to bite 'em;
> Little fleas have lesser fleas,
> and so, *ad infinitum*."

It would seem that as medicine has been fragmented, each segment has tended to become autonomous. Lines of communication have been severed, or, at least, reception between specialists of different types has faded to the limits of intelligibility.

It is obvious that any real frictions between medical practitioners of various types have no financial basis. Rather, the difficulties stem from a lack of mutual understanding and esteem. All fragments of Medicine should come together, of their own volition, and the means that they can use for that purpose—the drawstring—is the "consultation." By renewing and utilizing that line of communication, men whose fields of interest have led them in more or less opposite directions can work together and help one another.

In the treatment of almost any condition in any patient, it is probable that several courses of action are open. It is also probable that as circumstances vary, one or the other of these courses may be "best."

Why shouldn't each of us look over the other fellow's wares? He may have something newer, better or safer. In doing so, none of us needs be self-effacing. He shouldn't forget that after he has looked over the field he may find that the most satisfactory answer to his problem is the one that lies in his own "stock in trade." You, too, can be right.

IOWA LAGS IN A.M.E.F. CONTRIBUTIONS

If the American Medical Education Fund is to go over the top this year, the physicians in every state must make additional contributions. But Iowans must make an extra effort, for they actually have paid into the fund a lesser amount than the College of Medicine at the State University of Iowa received from it last year, and proportionately far less than have doctors in other states.

For the year 1954, the College of Medicine at SUI received $32,343.00 from the A.M.E.F., though the doctors of Iowa had contributed only $21,035.20, and though it is probable that much of that amount was earmarked for schools outside the state.

The increased costs of medical education make the survival of the A.M.E.F. a "must" if the medical schools are to be kept free from federal control.

Remember that contributions to the Fund can be deducted from taxable income!

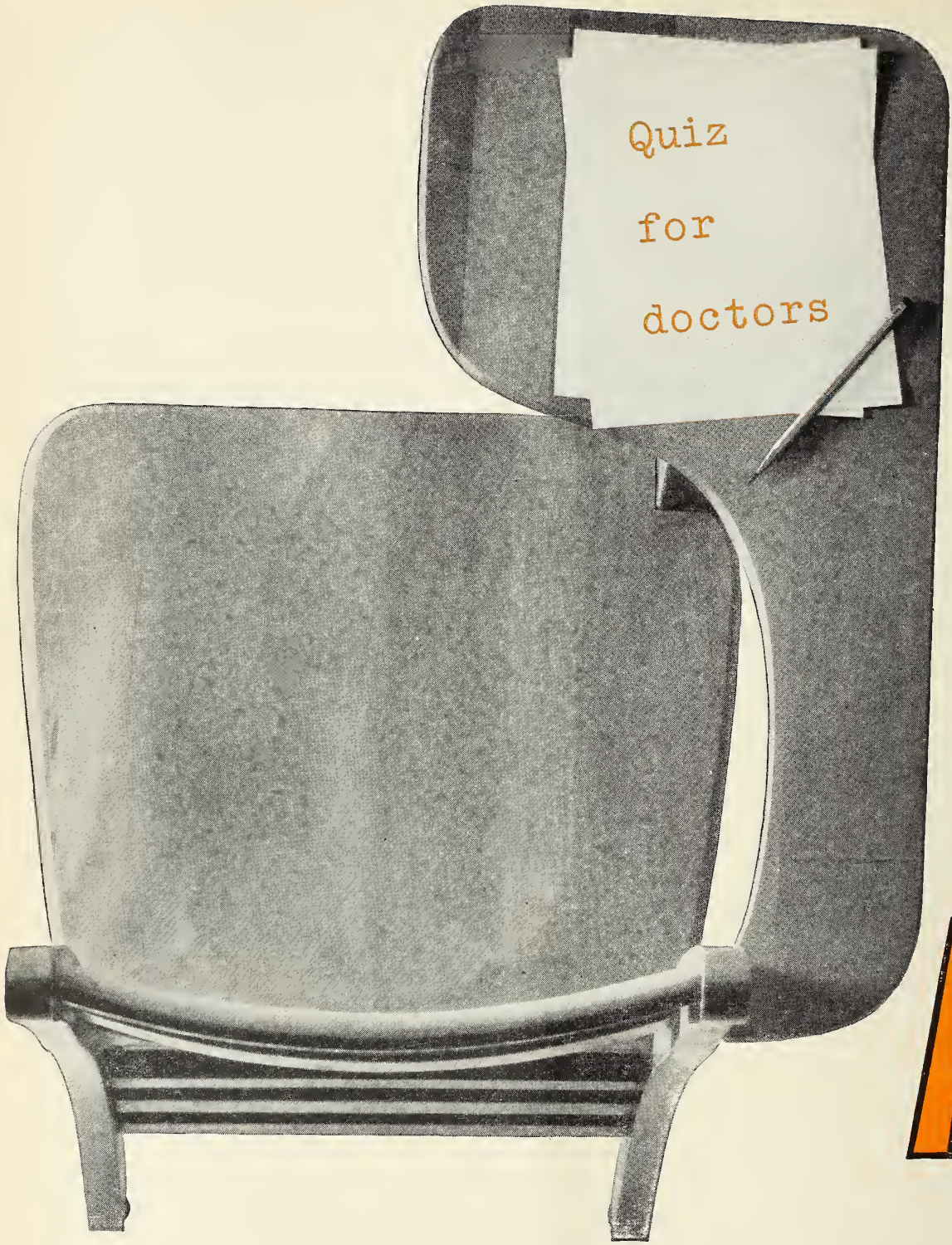
PRESIDENTS' AND SECRETARIES' CONFERENCE

The Iowa State Medical Society's second biennial Conference of County Society Presidents and Secretaries will be held at the Savery Hotel, in Des Moines on Sunday, October 23, 1955.

A program in final form will be sent to all county medical society presidents and secretaries, legislative contact men and public relations representatives. The following is as nearly definite a schedule as is available as the JOURNAL goes to press:

PROGRAM (TENTATIVE)

9:30 a.m.	Registration
10:00 a.m.	Remarks of Welcome—Dr. L. A. Coffin, president.
10:10 a.m.	Report of the Board of Trustees—Dr. Fred Sternagel, chairman
10:20 a.m.	Report of the Secretary—Dr. R. F. Birge, secretary
10:30 a.m.	Report of the Executive Secretary—Mr. Donald L. Taylor, executive secretary
10:40 a.m.	Report on National Legislation—Dr. David Allman, Atlantic City, chairman of the Committee on Legislation and trustee of the AMA
11:00 a.m.	Review of the Legislative Organization of the AMA—Mr. C. Joseph Stetler, Chicago, director of the AMA Law Department
11:20 a.m.	Report of the ISMS Legislative Committee—Dr. F. C. Coleman, chairman of the Legislative Committee, and Mr. Robert Throckmorton, legislative representative
11:45 a.m.	Discussion
12:15 p.m.	Luncheon (Probable speaker: Frank Dickinson, Ph.D., director of the AMA Bureau of Medical Economics)
1:45 p.m.	Present Old Age and Survivors' In-



A

(You probably know every answer!)

Q. Which is today's most widely prescribed broad-spectrum antibiotic?

A. ACHROMYCIN — it's first by many thousands of prescriptions.

Q. What are some of the advantages of ACHROMYCIN?

A. Wide spectrum of effectiveness.
Rapid diffusion and penetration.
Negligible side effects.

Q. Exactly how broad is the spectrum of ACHROMYCIN?

A. It has proved effective against a wide variety of infections, caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa.

Q. In what way are ACHROMYCIN Capsules advantageous?

A. For rapid and complete absorption they are dry-filled, sealed capsules (a Lederle exclusive!) No oils, no paste...tamperproof.

Q. Who makes ACHROMYCIN?

A. It is produced — every gram — under rigid quality control in Lederle's own laboratories and is available only under the Lederle label.

ROMYCIN*

Hydrochloride
Tetracycline HCl Lederle

Lederle

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY PEARL RIVER, NEW YORK

*REG. U.S. PAT. OFF.

surance Practices—Dr. H. E. Wichern, Des Moines

2:00 p.m. Report on Public Relations—Dr. Otto N. Glesne, chairman of the Public Relations Committee, and Mr. Ray Stewart, director of public relations

2:30 p.m. Public Relations in Medical Practice—Mr. James E. Bryan, Summit, New Jersey, public relations consultant and author

3:00 p.m. Report on Hospital-Physician Relations—Mr. Philip Cless, Des Moines, attorney

3:30 p.m. General Discussion

4:00 p.m. Adjournment

HIGHLIGHTS OF AMA INSTITUTE ON P-R

The fourth annual AMA Public Relations Institute, held at the Drake Hotel, in Chicago on August 31 and September 1, drew an attendance of more than 300, and the program was regarded as the most worthwhile of any presented so far. In addition to the medical public relations specialists, the executive secretaries of nearly all of the state medical societies, many executive secretaries of metropolitan county organizations, more than 70 physicians were in attendance.

At one of the sessions, Dr. Thomas P. Murdock, a member of the AMA Board of Trustees, revealed that the national organization has employed the firm of Bozell & Jacobs, Inc., Chicago, as public relations counsel.

Plans are already underway for the Eighth National Medical Public Relations Conference, which will be held at the Statler Hotel, Boston, Monday, November 28, just prior to the opening of the AMA Clinical Session. That conference is held primarily for physicians responsible for esablishment of public relations policies within their state and county societies, whereas the Chicago institute is held primarily for executive secretaries and staff personnel.

COOPERATIVE PLANNING IS URGED

The first of the sessions at Chicago, on August 31, concerned the objectives and functions of the Washington Office of the AMA, and included talks by Dr. David B. Allman, of Atlantic City, chairman of the Committee on Legislation; Mr. C. Joseph Stetler, director of the Law Department; Mr. George E. Connery, editor at the Washington Office; and Mr. Charles S. Nelson, Columbus, Ohio, executive secretary of the Ohio State Medical Association. Those men discussed the technics by which the Washington Office informs congressmen and senators of physicians' views regarding proposed legislation, and by which it keeps the profession up to date on congressional and administration activities in the health field.

The second forum discussion on that first day concerned planning ahead for better public relations. The participants were Mr. Scott Jones, of the Gardner & Jones Advertising Agency, Chicago; Mr. Samuel L. Austin, of Bozell & Jacobs, Inc., Chicago; Dr. David G. Welton, of the Mecklenberg County Medical Society, Charlotte, North Carolina; and Mr. Robert D. Potter, executive secretary of the Medical Society of the County of New York. The outstanding points made by those speakers were (1) that good public relations programs don't "just happen," and (2) that one cannot buy good will when the climate is not right.

The following concrete suggestions for P-R cooperation were offered:

1. The goals of public relations, both long and short term, should be known by all concerned.
2. Each society's public relations committee should be a strong one.
3. The policies under which medical public relations operates should be written down for all to refer to.
4. There should be a concise annual report on public relations.
5. Each medical society should avail itself of adequate opinion research.
6. One always should plan for the unexpected.

Public relations were defined as being like tea —its strength shows up when it is in hot water!

The third session concerned the use of applied psychology in making individual doctors feel that they are, in fact, parts of their medical society's public relations program. The panel members were Mr. A. G. VanDusen, director of public relations at Northwestern University; Mr. Robert J. Amick, field secretary of the Indiana State Medical Association; and Mr. Lyle A. Limond, executive secretary of the North Dakota State Medical Association.

The fourth meeting concerned relationships between medicine and popular magazines, and included talks by Mr. Steven T. Donohue, of the AMA Department of Public Relations; Mr. Howard Whitman, of Westport, Connecticut, a free-lance writer and commentator; and Mr. James Riggs and Mr. J. M. Liston, of Des Moines, editorial staff members of BETTER HOMES AND GARDENS. Their remarks reflected their belief that doctors should work only with writers and magazines in which they have confidence, and should leave the content of projected articles and the details of the writing job to the discretion of the experts.

The fifth session on the first day of the Institute concerned putting AMA public relations aids to use. The panel members were: Miss Carol Towner, executive assistant in the Department of Public Relations; Mr. William B. Harlan, representing the P-R Committee of the Medical Society of the State of Pennsylvania; Mr. John Guy Miller, field secretary of the Kentucky State Medical Association; and Mr. William N. Hilliard, executive assistant for public relations of the Med-

(Continued on page 545)

President's Page

An excellent program has been arranged for the conference of county medical society presidents, secretaries, public relations chairmen and legislative contact men which is to be held at the Savery Hotel in Des Moines, Sunday, October 23. It includes outstanding leaders in the field of legislative and public relations at the state and national levels. Dr. David Allman, a member of the Board of Trustees of the AMA and chairman of the Legislation Committee, will discuss general legislation in which the AMA has an interest. Mr. C. Joseph Stetler, Director of the Law Department of the AMA, will review the legislative organization of the AMA and its relationship to the individual doctor. Mr. James E. Bryan, of Summit, New Jersey, a nationally prominent public relations consultant and author of the book, "Public Relations in Medical Practice," will appear.

Officers of the Iowa State Medical Society will report on various activities. Please hold that date open. I strongly urge you to make every effort to be present. It is my opinion that this is one of the most important meetings we shall hold this year. Its main purpose is to assist county medical societies in organizing their public relations and legislative programs.

L. R. Coffin, M.D.
President

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

CLINICAL BIOCHEMISTRY, by *Abraham Cantarow*, M.D., and *Max Trumper*, Ph.D. (Philadelphia, W. B. Saunders Company, 1955. $9.00).

COUNSELING IN MEDICAL GENETICS, by *Sheldon C. Reed*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $4.00).

ADVANCES IN INTERNAL MEDICINE, by *William Dock*, M.D., and *I. Snapper*, M.D. (Chicago, The Year Book Publishers, Inc., 1955. $8.50).

PREMATURE INFANTS (A Manual for Physicians), by *Ethel C. Dunham*, M.D. (New York, Paul B. Hoeber, Inc., 1955. $8.00).

BOOK REVIEWS

A TEXTBOOK OF MEDICINE, ed. by *Russell L. Cecil*, M.D., *Robert F. Loeb*, M.D., and associates *Alexander B. Gutman*, M.D., *Walsh McDermott*, M.D., and *Harold C. Wolff*, M.D., Ninth Edition. (Philadelphia, W. B. Saunders Company, 1955. $15.00).

This book, contributed to by more than 170 well known and qualified authorities, is distinctive for its comprehensiveness balanced by brevity, and for its presentation of pertinent facets of disease processes, including etiology, histology, physiologic chemistry, pathology, clinical features, differential diagnosis, laboratory studes and treatment. It is useful not only to the student as an introduction to clinical medicine, but also to the practicing physician for easy reference.

The world of medicine is in a state of constant and rapid flux, and if a textbook is to be really versatile, it must keep up with the latest developments in theory and treatment. Cecil's ninth edition fills that need by adding over 40 new articles and revisions of articles.

The organization is basically the same as in previous editions, with sections on infectious diseases, those due to chemical and physical agents, deficiency and metabolic diseases, and those concerning organ systems of the body. However, there is a trend from organization on a symptomatic or organ-system basis to one based on etiologies. For example, there is a shift from separate consideration of the effect of syphilis on the vascular system in the section on circulation to a total picture of syphilis itself in infectious dseases. Similarly, the consideration of hemolytic jaundice has been taken up in connection with hematology, rather than with gastroenterology: Wilson's disease, familial periodic paralysis and others are now discussed as metabolic disturbances, rather than as illnesses of the nervous system; amyloidosis, melanuria and others are discussed as metabolic rather than urinary difficulties; and amyotonia congenita, and myotonia atrophicus are treated as muscular rather than nervous disturbances.

Whereas it is desirable to paint a vivid and living picture of disease, and to dwell on important factors, graphic presentation is sacrificed for the sake of achieving completeness and brevity.

This newer edition is in bolder print and on a softer background, therefore having the advantage of being much easier on the eyes.—*Eugene Brasseur*, M.D.

PROLONGED AND PERPLEXING FEVERS, by *Chester S. Keefer*, M.D., and *Samuel E. Leard*, M.D. (Boston, Little, Brown & Co., 1955. $5.50).

This is a most valuable book not only because of the importance of its subject, but because of the excellent way in which the material is presented.

Dr. Chester Keefer, one of the leaders in internal medicine for many years and currently professor of medicine at Boston University, is the senior author. He has held and still holds many important investigative and advisory positions, in addition to his well known connections with antibiotics research.

The book is limited to fevers of more than two weeks' duration. Normal variations, psychogenic fever, habitual hyperthermia and environmental factors are first discussed. The general approach to the problem of diagnosis follows.

The infectious fevers—common and uncommon, local and general—are next presented. Unusual variants of common causes of prolonged fever, such as subacute bacterial endocarditis without murmurs or bacteremia, are discussed at some length, whereas the more generally known conditions are treated in briefer fashion. Numerous case reports amplify the text, and although many of them appear to have been studied years ago, the abstracts are usually concise, illustrative and easily understood. Tumors, blood dyscrasias and miscellaneous causes are next taken up. A good thumb-nail sketch of many uncommon conditions rewards the diligent reader of this material.

It is a short, easily read book, and it presents a large variety of clinical entities. It should be valuable, therefore, as a reference work, since if one is to make a diagnosis, he first must remind himself of all the possibilities.—*Charles H. Gutenkauf*, M.D.

HANDBOOK OF PEDIATRICS, by *Henry K. Silver*, M.D., *C. Henry Kempe*, M.D., and *Henry B. Bruyn*, M.D. (Los Altos, California, Lange Medical Publications, 1955. $3.00).

It is amazing that so many subjects can be included in a handbook such as this. It is a very concise and brief digest of pediatrics, to be used only as a supplement, rather than as a replacement, for standard pediatric texts and reference works. The authors admit that for clarity and brevity there is a tendency toward oversimplification and dogmatism. That is true. This pocket-size work is useful only as a handbook, as the title implies.—*M. E. Alberts*, M.D.

Bone and Bones (Fundamentals of Bone Biology), by *Joseph P. Weinmann*, M.D., and *Harry Sicher*, M.D., D.Sc., Second Edition. (St. Louis, The C. V. Mosby Company, 1955. $13.75).

It is interesting to note that the second edition of this volume, prepared by physicians who are instructors in a college of dentistry, is an excellent outline of the subject matter for all physicians. The authors point out that the enigma of bone formation and resorption calls for hypothetical concepts in many phases of the basic biological processes involved. It would appear that further consideration might be given to the action of enzymes, particularly phosphatase, which is mentioned only once in the volume.

All physicians will find the principal factors of bone growth in health and disease presented in a factual manner, well illustrated for clarity in further understanding this fascinating subject.—*Everett M. George*, M.D.

MENTAL ILLNESS

THE NORMAL MIND

Throughout the series of discussions that have appeared in this column, our attention has so far been directed to various types of mental illness. But it is important that we consider the *normal* mind, for it is a subject about which our patients always show an interest.

As clinicians, we are repeatedly asked two sorts of questions. The first kind is phrased variously: "Doctor, am I crazy?" "Is my husband right in thinking that I am losing my mind?" or "These thoughts that I've been having—are they really peculiar?" But however worded, the patient's query reflects real worry over the social acceptability of his or her behavior. The other sort of question is "How can I be normal in my thinking, feeling and acting?" If we are to give intelligent answers to any of these, we need to have formulated a clear concept of average or acceptable behavior, or, preferably, a concept of mental health.

Great men in various fields of endeavor have made some observations on the subject that are worthy of our meditation. Israel Zangwill, an English novelist, poet and dramatist who did his writing during the first quarter of this century, said, "The first symptom of insanity is often the delusion that others are insane." Elbert Hubbard, an American author and editor of much the same period, observed that "The look of age in his youth and the look of youth in his age is the mark of an exceptional man."

But the fundamental maxim of Christianity—the precept that has been quite appropriately called "the eleventh commandment"—is of equal or greater value to us in our search for a definition of normality: "Do unto others as you would that they should do unto you." That, it seems certain, must have been a law of mental health long before Jesus spoke it.

When a man tries to understand his fellow human beings—and that is a necessary step in any attempt to fulfill the Golden Rule—he links himself with his environment. He exercises his power of seeing through and feeling through to the inner lives of his associates and acquaintances. And he recognizes and accepts his limitations without bluffing or attempting to mislead. That process, furthermore, has several by-products. If he succeeds in understanding another man, it is unlikely that he will find it possible to hate him, and he will be quite unable either to think well of himself and ill of others, or to think ill of himself and well of others.

It is essential, of course, that we distinguish between the average or normal, on one hand, and the ideal, on the other. Hubbard's "exceptional man," the individual who succeeds in being old in his youth and young in his age, is obviously the latter, rather than the former. And no one needs to be told that people who succeed in following the Golden Rule throughout their lives are few and far between. For achieving normality it is sufficient that each of us should make an attempt and should achieve a measure of success. Indeed, the intent and the expenditure of effort to understand other people, to accept limitations and to adapt to them is the prime characteristic of the healthy mind.

We must conclude that there is a wide range of normality. Our differences make us individuals, and probably there are few effectual people who give conscious thought to whether they are normal or not. They are much more concerned to see that their motives and responses shall be well considered, and that their decisions are no more than actuated, rather than dictated, by their emotions. Because they have learned to face facts and to recognize other people's rights and interests, as they were frequently unable to do as children, they think of any other sort of behavior as infantile.

Success brings to the average individual only a moderate degree of elation, and failure no more than a moderate degree of depression.

The knowledge that we are physical beings, emotional beings and spiritual beings points the way for our training and development.

Since there is a wide range of normality for the human mind, the better goal is that of mental health. As Dr. Karl Menninger has said, "Let us define mental health as the adjustment of human beings to the world and to each other with a maximum of effectiveness and happiness: not just efficiency or just contentment or the grace of obeying the rules of the game cheerfully. It is all these together. It is the ability to maintain an even temper, an alert intelligence, socially considerate behavior and a happy disposition. This, I think, is a healthy mind."

COUNTY SOCIETIES

Boone

On September 20, Dr. W. C. Hoffman, of the Department of Otolaryngology at SUI, addressed the Boone County Medical Society on "Treatment of Facial Lacerations."

Dubuque

Dr. Walter J. Reich, assistant professor of gynecology and obstetrics at the Chicago Medical School, addressed the Dubuque County Medical Society September 13 on "Office Gynecology."

At the October 11 meeting, to be held at the Bunker Hill Country Club, Dr. J. Gilroy will discuss "Explosions in the Operating Room."

Kossuth

At a dinner meeting of the Kossuth County Medical Society on August 17, the team that had conducted a crippled children's clinic in Algona were honored guests. Following the meal, Dr. Read and Dr. Patton, pediatricians, discussed rheumatic fever, and Dr. Barnett, an orthopedist, spoke on pigeon-toedness.

Linn

Dr. J. Dewey Bisgard, professor of surgery at the University of Nebraska College of Medicine, addressed the Linn County Medical Society September 8 on "Cancer and Ulcers of the Stomach."

At the meeting on October 13, Dr. Charles L. Prince, practicing urologist of Savannah, Georgia, will be the speaker.

Page

On September 4, Drs. E. G. Diamond, L. Moriarty, R. Stockton and R. Allen, of the Kansas University Medical School, were guest speakers at the Page County Annual Fall Meeting held at Clarinda.

Polk

At the October 19 meeting of the Polk County Medical Society, Dr. R. K. Gilchrist, of Chicago, will speak on "Diverticulitis and Diverticulosis of the Colon."

Pottawattamie

The October 18 meeting of the Pottawattamie County Medical Society will concern itself with the subject of medical economics. The speakers will be Mr. Wilbur Quinn, director of physician relations for the Blue Shield and the Iowa State Medical Society, Dr. F. D. McCarthy, of Sioux City, and Dr. C. H. Flynn, of Clarinda. The addresses will be preceded by dinner, at 6:30, at the Hotel Chieftain, Council Bluffs, and visiting physicians will be most welcome.

Scott

At the regular meeting of the Scott County Medical Society on September 6, Dr. Harold E. Himwich, of Galesburg, Illinois, presented a paper on "Clinical Observations and Basic Investigations of the New Psychopharmacologic Agents." Dr. Himwich is director of research at the Galesburg State Research Hospital.

At the meeting on October 4, Dr. Raymond G. Bunge, professor of urology at SUI, will speak on "Male Infertility."

Wapello

At the September 6 meeting of the Wapello County Medical Society, Dr. E. S. Brintnall, director of surgery at the Iowa City V. A. Hospital, spoke on "Arterial Grafts." At the October 4 meeting, Dr. Herman J. Smith, of Des Moines, will discuss "Medicolegal Aspects of Heart Disease." Sessions are held at the Ottumwa Hospital and are preceded by dinner at 6:30.

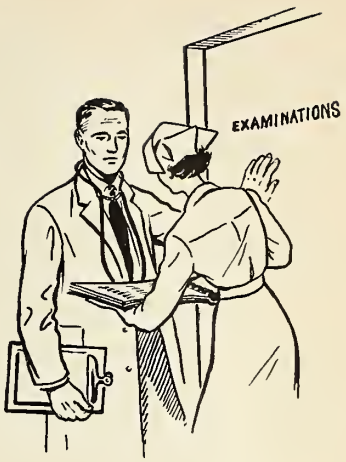
Webster

The guest speaker at a special meeting of the Webster County Medical Society, in Fort Dodge on September 3, was Dr. Komerei Nakayama, head of the Japanese branch of the International College of Surgeons. His topic was cancer of the stomach.

DEATHS

Dr. Marvin Wilmer Burleson, 41, a physician and surgeon who practiced for several years at Fort Dodge, died on the evening of August 18 at a clinic which he had recently opened in Dayton, Iowa.

THE DOCTOR'S BUSINESS



Personal Living Expenses

MILLARD K. MILLS

WATERLOO

The most controllable expense you have is the cost of your living. We refer here to your expenditures for such needs as housing, clothes, food and entertainment. They include no deductible items, no assets purchased and no repayments of borrowings.

Previous articles in this series have called your attention to the items that must be included in your "net taxable income." But what you do from that point on determines your "net gain" and your success in putting money to work for you.

The vast differences among the amounts so spent by families in similar circumstances demonstrate that living expenses are largely under the control of each man and wife. Some families live on $400 per month and feel well provided for; others seem to require twice that much or more.

1954 AVERAGES

The following averages summarize the results of a survey, conducted by Professional Management, of 1954 personal expenditures by Midwestern doctors:

Annual Income	*Living Expenses* *Annual*	*Monthly*
$5,000 to $10,000	$5,150	$430
10,000 to 15,000	6,600	550
15,000 to 20,000	8,300	690
20,000 to 25,000	9,100	760
25,000 to 30,000	10,450	870
30,000 to 35,000	11,900	980
35,000 to 40,000	12,550	1,050

It is interesting to note the proportionate rise in average living costs with the rise of income. What, then, are the components of a comfortable living for you and your family? There are five of them: (1) the size of your family, (2) your earning power, (3) the educational needs of your children, (4) your wife's requirements after the children have become self-sufficient, and (5) your own plans for retirement.

Unfortunately, the doctor with a large family will have a larger outlay for the present and will also have to make better provisions for the future. Prudent outlay of money in his situation is essential.

If you find that what you consider your current needs will not permit you to prepare for the future, a review of those "needs" is in order.

Many doctors handle it this way. The doctor and his wife sit down with their business consultant and make out a budget for themselves. They take into consideration their fixed expenses and their future aims, and they work out a practical plan to meet their requirements.

PREPARING TO MAKE A BUDGET

How should you go about preparing a workable budget? First, determine your earning power. If you have an established practice, you can arrive at a useful figure by averaging your earnings of the past few years. Second, based on your net taxable income, you should estimate your current taxes. Then figure your insurance needs for the coming year. Finally, decide how much you would like to save in the next twelve months. Subtract these three items from your estimated taxable income. The remainder will be the amount to which you must limit your personal living expenses. Here is an example:

Estimated Taxable Income		$20,000
Less: Federal Tax	$5,000	
Life Insurance Premiums	2,300	
Desired Gain (Savings)	4,300	
		11,600
Personal Living Allowance		$ 8,400

Remember, your figures must be practical and they must be followed, or a budget will be of no value to you!

On this basis, the doctor frequently delegates to his wife the handling of all household expenditures and the purchase of clothing. If she restricts herself to her "allowance" each month, she and her husband can accomplish their common aims. Such an arrangement leaves a maximum amount for investments and leads to a happy and secure financial future.

Mr. Mills is general manager of Professional Management.

Iowa Academy of General Practice

OBJECTIVES OF THE IAGP

Many questions come to us from our own members as well as from other people regarding the reasons for the existence of the Iowa Academy of General Practice. Many general practitioners who should be members question the purpose and aims of the organization. We are glad of the interest that those questions indicate, and we shall try to furnish some of the requested information.

Article III of the Constitution of the Iowa Academy of General Practice enumerates five objects of the organization.

1. *To promote and maintain high standards of the general practice of medicine and surgery.* Such standards are essential to proper doctor-patient relations, as well as to the maintenance of a feeling of well-being in the doctor. It is difficult for him to uphold those standards unless he has encouragement from other sources, and preferably from an organization of national scope.

2. *To encourage and assist young men and women in preparing, qualifying and establishing themselves in general practice.* The family physician is today the foundation of the excellent medical care in this country, and as a group it is the purpose of such doctors to encourage young men and women to enter their field. The AAGP, through its Congress of Delegates and its State Officers' Conference in Los Angeles, is working for the establishment of nation-wide educational practices that will provide prospective GP's a truly stable foundation.

3. *To preserve the right of the general practitioner to engage in medical and surgical procedures for which he is qualified by training and experience.* It is necessary that the rights of the general practitioner be preserved so that he can engage in the procedures for which he is qualified. Individual effort is not enough. There must be concerted effort of a large group in order to maintain these rights.

4. *To assist in providing postgraduate study courses for general practitioners and to encourage and assist practicing physicians and surgeons in participating in such training.* Postgraduate study will keep our standards high. One cannot practice successful medicine without postgraduate training, and our organization fosters, sponsors and requires this training in the belief that the best doctors in any community are those who are best trained.

5. *To advance the art and science of medicine; to improve personal and public health.* In this final objective, the Iowa Academy of General Practice unites with all other organizations that are made up of doctors of medicine.

There are no political purposes in our constitution, and we do not enter into any political controversy except when forced to do so in order to defend our position and the objectives for which we stand.

POSTGRADUATE COURSES AT SUI

The College of Medicine at the State University of Iowa has announced its postgraduate courses for 1955-1956. The entire list, together with as much information as is as yet available about speakers and topics, is to be found on page 487 of the September issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. Dates and subjects of the October and November courses can be found in the list of Coming Meetings in this issue of the JOURNAL. The sessions are well planned and will meet the needs of the general practitioner.

Special attention is called to the "Refresher Course for the General Practitioner," February 15, 16, 17 and 18, 1956. The program has not yet been completed, but close cooperation between the Iowa Academy of General Practice and the Department of Postgraduate Medical Studies at the University assures an excellent educational menu.

Members of the Iowa Academy are urged to attend these courses because of the extent of coverage and the balance of the program. Full postgraduate credit (formal) will be allowed.

OMAHA MIDWEST CLINICAL SOCIETY

The list of guest speakers who are to appear four or five times each at the Twenty-third Annual Assembly of the Omaha Midwest Clinical Society, at the Hotel Paxton October 24-27, is as follows: Dr. Frank H. Bethel, professor of internal medicine at the University of Michigan; Dr. G. V. Brindley, Temple, Texas, president-elect of the American Cancer Society; Dr. J. Scott Butterworth, associate professor of medicine at the New York University Postgraduate Medical School; Dr. Ralph E. Campbell, professor of obstetrics and gynecology at the University of Wisconsin; Dr. G. W. N. Eggers, pro-

fessor of orthopedic surgery at the University of Texas; Dr. Francis L. Lederer, professor and head of the Department of Otolaryngology at the University of Illinois; Dr. Charles W. Mayo, of Rochester, Minnesota; Dr. Harold D. Palmer, professor of pathology at the University of Colorado; Dr. Howard P. Rome, professor and head of the Section of Psychiatry at the Mayo Clinic and Foundation; Dr. Carl Rusche, clinical professor of urology at the University of Southern California; and Dr. Ralph Spaeth, professor of pediatrics at the University of Illinois. There will be panel discussions of upper gastrointestinal hemorrhage, treatment of carcinoma of the endometrium, poisoning in children, and treatment of common cardiovascular problems. And there will be 35 or more lectures by members of the Society. Members of AAGP can receive formal postgraduate credit for the actual hours of their attendance.

AMA SCHOOL HEALTH CONFERENCE

The fifth Annual Conference on Physicians and Schools, sponsored by the AMA Bureau of Health Education, will be held on October 12-14 at the Hotel Moraine in Highland Park, Illinois, a suburb of Chicago.

These conferences, held every other year, are designed to explore programs for joint action by public health officials, educators and physicians leading to the development of effective school health services. Surgeon General Leonard Scheele, of the U.S.P.H.S., Mr. Samuel Brownell, U. S. commissioner of education, and Dr. Elmer Hess, president of the American Medical Association will be principal speakers.

Panel discussions will cover the following areas: use of health records; emotional aspects of athletics for children and youth; the personal physician and school health; preparations for disaster situations at school; health aspects of comics, movies and television; the school's role in handling personality and behavior problems; the child's activity load; and home-school cooperation.

MEDICOLEGAL SYMPOSIA AT OMAHA AND CHICAGO

A medicolegal symposia that the AMA will conduct in Chicago on October 9 and at Omaha on October 16, a variety of subjects will be covered, including professional liability, the application of the new provisions of the Internal Revenue Code to the medical and legal professions, the role of the physician in the detection of violent deaths, and the role of the physician and the lawyer in establishing medical facts in a personal injury case.

One interesting feature at both of the meetings will be a demonstration of a medical expert witness under direct and cross-examination. The witness will be Dr. Ralph E. DeForest, secretary of the AMA Council on Physical Medicine and Rehabilitation. He will undergo direct examination by Mr. R. G. VanBuskirk and cross-examination by Mr. Edwin J. Holman, both members of the AMA legal staff. More than 300 physicians are expected at each of the meetings.

GASTROENTEROLOGY FOR GENERAL PHYSICIANS

The University of Minnesota announces a continuation course in Gastroenterology for General Physicians to be held at the Center for Continuation Study on the Minneapolis campus December 1-3, 1955. Dr. Henry L. Bockus, professor of medicine and chairman of the Department of Medicine at the University of Pennsylvania, will be guest speaker.

Highlights of AMA Institute on PR

(Continued from page 538)

ical Society of the State of North Carolina. Of particular note was Mr. Harlan's report on the Pennsylvania project entitled "Safeguard Your Health," in which televised film announcements, spot announcements on radio, and pamphlet distribution through doctors' offices serve as means of disseminating important health information.

ASSAULT CHARGES INCREASING

The final Wednesday meeting was divided into state society, large county society, and small county society sections. The state society group discussed (1) the corporate practice of medicine, (2) professional liability, and (3) press, radio and television coverage of medical conventions. Discussions of the first two topics consisted largely of recitals of personal experiences. It was the observation of a number of the participants that many lawsuits are now based on assault, rather than on malpractice, and, of course, insurance does not protect physicians against judgments consequent to proof of that charge. The exchange of views on the third topic concerned means of organizing conventions so as to assure maximum press coverage.

The Thursday morning session dealt with plans for opposing the proposal that the totally and permanently disabled be eligible for immediate Social Security benefits. Some of the points covered in the discussions are included in an editorial in this issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY entitled "Buttonhole Your Senator!" The noon and afternoon meetings on that second day consisted mainly of discussions of forthcoming television programs such as "Medic," "March of Medicine," and "Medical Horizons." AMA films available to medical societies were previewed.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

POLIOMYELITIS CASE TABULATIONS

Following is a tabulation of 1955 poliomyelitis cases in Iowa to September 3:

January	9	April	9	July	86	
February	5	May	16	August	220	
March	1	June	13	September	37	(1st. week)
				TOTAL	396	(Sept. 3)

The succeeding table, drafted as of September 9, shows Iowa poliomyelitis cases during 1955 in children 5-9 years old:

	Received Vaccine		*Did Not Receive Vaccine*			*Vaccination Status Unreported*		
Age	Nonparalytic	Paralytic	Unspecified	Nonparalytic	Paralytic	Unspecified	Nonparalytic	Paralytic
5				17	1		3	
6	2		1	12	2	2		
7	17	1		4		1		
8	9	1		4			1	
9	2		1	6	2*		2	
Totals	30	2	2	43	5	3	6	0

* One deceased.

MORBIDITY REPORT

Diseases	*Aug. 1955*	*July 1955*	*Aug. 1954*	*Most cases reported from these counties:*
Diphtheria	0	0	1	.....
Scarlet Fever	11	27	16	Mills, Polk, Scott
Typhoid Fever	1	4	7	Linn
Smallpox	0	0	0	.....
Measles	61	572	121	Buchanan, Linn, Scott
Whooping Cough	46	59	29	Black Hawk, Dubuque, Scott
Brucellosis	24	27	27	Black Hawk 4, Woodbury 2, others scattered 1 to a county
Chickenpox	10	98	10	Des Moines 5, others scattered
Meningococcus Meningitis	0	1	2	.....
Mumps	68	205	106	Dubuque, Humbolt, Linn, Scott
Poliomyelitis	220	86	326	Kossuth, Lee, Polk 31 paralytic; 167 non-paralytic; 22 unspecified
Infectious Hepatitis	32	37	248	Black Hawk, Story
Rabies in Animals	6	18	27	Scattered, 1 to a county
Tuberculosis	46	44	51	For the State
Syphilis	76	119	118	For the State
Gonorrhea	50	71	61	For the State

REGISTRY PROPOSED FOR T-B SUSPECTS

Drs. Abraham Gelperin and Leon J. Galinsky, of Des Moines, believe that in many communities and some whole states—but specifically in some parts of Iowa—registries should be kept of patients suspected of having tuberculosis. Their suggestion is to be found in the conclusion of a report they have published in the August, 1955, issue of PUBLIC HEALTH REPORTS* on their study of delayed diagnoses and the possible reasons therefor.

The investigation included all of the 83 Polk County persons in whom active tuberculosis was discovered during 1952 and 1953. Of those 83, they learned that despite population screenings and contact investigations, 52 (approximately 60 per cent) had sought medical treatment from their family doctors or from clinics *only because they felt ill.* And in addition, these investigators point out, only 7 (8.4 per cent) began receiving treatment while their cases were in the minimal stage, whereas 33 (39.8 per cent) had moderately advanced disease by that time, and 39 (47 per cent) were "far advanced." Four patients had extrapulmonary tuberculosis. "Although a low discovery rate was anticipated in [this] low incidence area," the authors state, "the detection of only 7 minimal cases was of real concern."

As regards the lapse of time between the onset of symptoms and the definitive diagnosis, Drs. Gelperin and Galinsky found that the median had been in excess of six months. Between the men patients (52 of them) and the women patients (31), there was no significant difference as regards this delay, but in the group who presented themselves for help, rather than were discovered, four times more men than women had "far advanced" cases.

The authors believe that there is room for improvement not alone in finding possible cases, but in arriving at diagnoses. They report that of the 20 cases of moderately advanced tuberculosis coming to diagnosis because of symptoms, 10 had been observed for possible tuberculosis for more than six months. Indeed, among the moderately-advanced, far-advanced and extrapulmonary cases taken together, it is their opinion that "missed opportunities could be considered in two-thirds of the

* 70:761-766 (August) 1955.

cases." The slip-ups included (1) misreading of x-rays, (2) interruption of follow-up studies of contacts and suspected cases and (3) failure to investigate histories of vague, "unimportant" symptoms.

Drs. Gelperin and Galinsky do not maintain that the establishing and maintaining of a tuberculosis-suspect registry would be a panacea. Delay in diagnosis, they point out, is in some cases the patient's own fault, and even when it isn't, physicians are not completely blameworthy, for "the diagnosis of active pulmonary tuberculosis is not a simple decision and may be equally troublesome for the family physician and for the medical specialist."

Suspect registries are proposed chiefly because they are promising case-finding devices not now generally in use. Each registry would include all individuals who react to the tuberculin skin test, and all whose x-ray findings, though stable, have been suspicious. Such a proposal, Drs. Gelperin and Galinsky say, is based upon the assumption that anyone who has had a tuberculous infection has within him the potentiality for subsequent active disease.

"With reporting centralized in a health department," they conclude, "these individuals could be followed at regular intervals by an official agency. They could also be impressed with the importance of disclosing their status to the physicians whom they may consult for other reasons."

PSYCHIATRIC LECTURES IN ILLINOIS

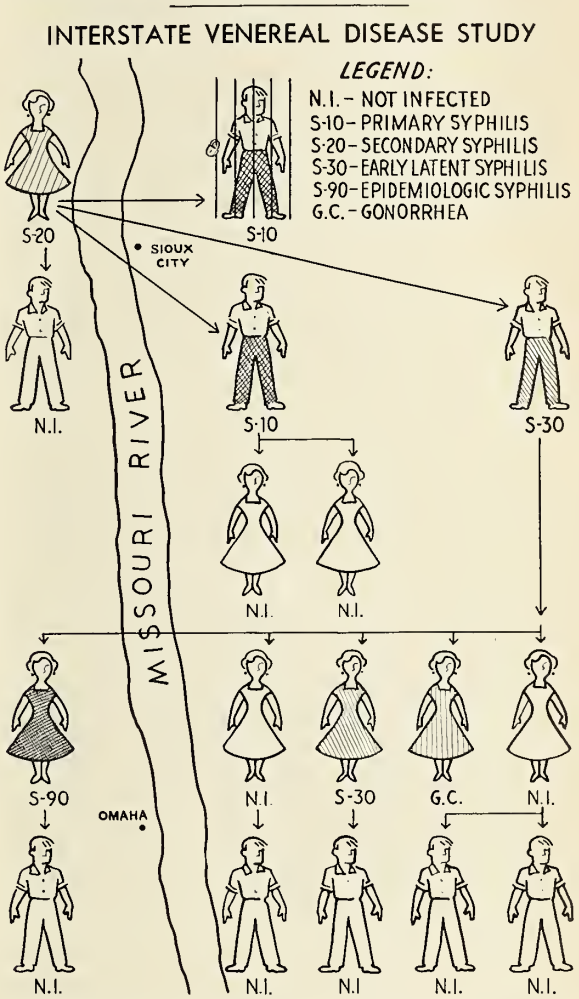
Physicians who plan to be in Chicago on one or more of the following dates will be interested in knowing of the lectures on psychiatry to be given at the North Shore Health Resort, 225 Sheridan Road, Winnetka. The addresses begin at 8:00 p.m., and AAGP members can receive credit for attending them.

Oct. 5 "Management of Psychiatric Emergencies"—K. M. Bowman, M.D., of the University of California
Nov. 2 "The Use and Abuse of Sedatives and Stimulants"—F. J. Gerty, M.D., of the University of Illinois
Dec. 7 "The Management of the Anxious Patient"—L. L. Robbins, M.D., of the Menninger Foundation

WHY DE-EMPHASIZE SYPHILIS?

Unfortunately, as the first skirmishes against syphilis appeared won, a sense of false security developed, even among physicians; and in 1950 Congress began drastic cuts in the funds necessary to sustain the essential activities of the program. This dubious economy move also was promoted by the misconception that penicillin with its excellent treatment effects would somehow possess equal case-finding magic. Epidemiologists are aware that the propagation of venereal disease is sustained by the reservoir of infectious undiagnosed cases. Treatment is essential to the diagnosed case but cannot affect the undiagnosed reservoir or rate of spread therefrom. As a result of premature de-emphasis, 24 state health departments now consider their venereal disease funds insufficient to permit effective case finding and to insure a continual fall in rates. Supporting their belief is the fact that during 1954, 20 states experienced a rise in reported syphilis rates, and 36 a rise in gonorrhea.

—A. L. VanDuser, M.D., "Venereal Disease Is Still With Us," Wisconsin M. J., May, 1955.



The Nebraska-Iowa cooperative venereal disease study pictured on this page is an example of the working relationships which have been developed for communicable disease control between Iowa and neighboring states.

In this instance, the Venereal Disease Division of the Nebraska State Department of Health reported to the Iowa State Department of Health three contacts of a secondary case of syphilis diagnosed in Nebraska. The chart shows the follow up of the reported contacts, the number of persons investigated and the venereal disease findings for the group.

Reciprocal notification of disease goes on daily between states. In this instance, since Nebraska had found a highly infectious case of syphilis, the original notification to Iowa was by telephone.

WOMAN'S AUXILIARY NEWS

Mrs. Edw. B. Hoeven, *Woman's Editor*
224 East AltaVista, Ottumwa

Mrs. Wilson Wolfe, *Asst. Woman's Editor*
N.E. Elm Street, Ottumwa

LINES FROM THE PRESIDENT

Certainly as much as does anyone else, I am anxious to have each county Auxiliary choose for itself the types of work that will interest it most and, at the same time, participate in undertakings that have been suggested by the state and national Auxiliaries. But, like my predecessors, as your new president I have one project in which I am especially interested, and I ask your support for it. It is the course of instruction for girls who are ambitious to become what the National Safety Council calls "parents-by-the-hour" and what the Woman's Auxiliary calls GEMS (Good Emergency Mother Substitutes).

It may be that in your community some other organization is already making an effort at giving girls the requisite training. Some elementary and secondary schools attempt education in child care. Home economics courses at secondary school and college levels frequently include it. And some youth organizations such as the Girl Scouts and the Campfire Girls have specially designed programs for the purpose. Your first step should be a series of inquiries designed to find out which groups, if any, are giving such training, what share of the girls in the community are being benefitted and whether or not the training is sufficiently thorough. If your investigation reveals that the task is being attempted, you should take pains to be sure that the course of study emphasizes safety, and when the plans and procedures are satisfactory, your group can give them your formal approval.

If you find no baby-sitter training program in operation, you can do your community a very real and lasting service by organizing or sponsoring the organization of one. One or another of the above-named groups or institutions is likely to welcome the suggestion and be glad of the Auxiliary's assistance in setting it up. Or such instruction could be made the content of your Future Nurses Club programs. Whatever organization agrees actually to get the girls together and conduct the classes, your Auxiliary can be sure of having enthusiastic assistance and support from the local chapters of the American Red Cross, the Y.W.C.A. and the P.T.A., and the local health department.

Your third step should be another investigation. To be sure that the course will do a maximum of good, it is essential that you discover the faults of baby-sitting arrangements presently existing in your town. For that purpose you will need some newspaper publicity designed to acquaint your fellow townspeople with what you intend doing. I am sure that editors, without exception, will quickly recognize the value of your undertaking and will give you the requisite space. Besides stimulating both baby-sitters and parents to answer your questions fully and promptly, the newspaper stories will help to focus public interest upon baby-sitting service and to provoke thought upon the problems it poses.

Through the questionnaires that you get your newspaper to publish for you or which you distribute through the mails, you should solicit data regarding the dissatisfactions or more serious difficulties that it will be the purpose of your GEMS course to prevent. Space in those questionnaires should be provided for the listing of accidents, even minor ones, that occurred while the sitter was in charge, near accidents or mishaps that the sitter prevented, deficiencies in the instructions given to the sitter by the departing mother, instances of unreliability in the sitter, whether or not parents return at or about when they said they would, whether the sitters must go home alone, how many school nights per week the sitters are permitted to work, and whether or not they accept work in strange households or in sections of town distant from their homes. Perhaps it would be well for you to ask your informants not to mention the names of the individuals whom they criticize, for you will want to avoid causing embarrassment for anyone. In published summaries, the identifying details should be camouflaged whenever you cite a specific incident as an example.

The instructors who are selected to train GEMS must, of course, be experts in the matters with which they undertake to deal, and they should be people who occupy respected places in the community. Following is a suggested outline for such a training course:

Lesson 1. A. Introduction, stressing the qualifications of a good baby-sitter, her responsibilities and the responsibilities of the baby's parents. B. A talk on child care. C. A practice session in lifting and caring for a baby, changing diapers, and choosing clothing for sleeping, going outdoors, etc.

Lesson 2. A. Review and question-and-answer period covering Lesson 1. B. Feeding. C. Bathing. D. Sleep and sleep habits. E. Practice session in bathing and feeding a baby. (A large doll can be used and Red Cross procedures followed.)

Lesson 3. A. Review of Lesson 2. B. Toys and

play. C. Crafts and songs to teach children (These may be taught by an older Campfire Girl). D. Handling a child with behavior problems (This may be taught by a physician).

Lesson 4. What the parents expect and what the sitter expects. (Show the 16 mm. sound films "The Baby Sitter" and "Cooking-Kitchen Safety." They are 10 minutes and 15 minutes in length and are available from Young America Films, New York City.)

Lesson 5. Summary and examination.

My wishes to you for successful participation in this worthwhile project. For further information on the baby-sitter course, write to our Safety Chairman, Mrs. Clare A. Trueblood, in Indianola, or write to me.

Let us dedicate ourselves this year to our Auxiliary, and may our efforts be rewarded by the confidence and trust of the people of our communities and the appreciation of the medical societies to which we are Auxiliary.

Mrs. Charles H. Flynn
President

COORDINATION OF NURSE RECRUITMENT

Throughout the past year a succession of steps has been taken to coordinate the nurse recruitment activities of the many Iowa organizations that are interested in that work. As the outcome of meetings last fall, the first of which was attended by representatives of the Iowa Board of Nursing Examiners, the Coordinating Council of the National League for Nursing and the Iowa State Nurses Association, the Iowa Hospital Association, the Iowa League for Nursing, the Iowa State Nurses Association, the Licensed Practical Nurse Association of Iowa, the Iowa Schools of Practical Nursing, the Student Nurse Association of Iowa and the Woman's Auxiliary to the Iowa State Medical Society, it was decided that for the sake of efficiency and economy, a joint Committee on Careers and a subordinate Committee on Materials should be formed so that publicity work could be done without duplication.

The Materials Committee consists of Miss Jean Baer, Iowa City, administrative assistant at the College of Nursing, SUI, chairman; Mrs. E. A. Larsen, Centerville, chairman of the Auxiliary's Nurse Recruitment and Loan Fund Committee; Mr. Earnest Johnson, Jefferson, chairman of the Professional Practice Council of the IHA; Miss Vera Sage, Des Moines, executive secretary of the Iowa Board of Nurse Examiners and the INA; Mrs. Margaret Jacobson, Des Moines, assistant executive director of the INA; Sister Mary Suzanne, Ottumwa, director of nursing at St. Joseph Hospital; Mrs. Betty Arthur, Waterloo, president of the Iowa Licensed Practical Nurses' Association; Miss Elizabeth Busch, Des Moines, executive director of the INA; and Mrs. Hazel Lammey, executive secretary of the state Auxiliary, in whose office the mailing of nurse-recruitment literature is being centralized.

The Materials Committee's job will be to recommend an annual budget for nurse-recruitment mailings, to determine what materials should be sent to various ages of girls, to advisory personnel in the schools, etc., and to compose the form letters that accompany the literature.

Officers of the Careers Committee were elected last April. They are: Mrs. D. H. King, Spencer, chairman; Mrs. E. A. Larsen, Centerville, vice-chairman; Miss Thelma Luther, Des Moines (representing the State Department of Health), recording secretary; Mrs. Lammey, executive secretary; and Mrs. Maude Brussels, Sioux City (representing the city-county health department there), treasurer. The tasks of the Careers Committee are to pass upon the recommended budget and to raise the necessary funds by soliciting contributions from the member organizations and from service clubs, church groups, lodges and veterans' organizations.

The Materials Committee has submitted a budget totaling $661.00, and to date, the following pledges have been received:

Iowa Hospital Association	$100.00
Iowa League for Nursing	100.00
Iowa State Nurses Association	100.00
ISMS and Its Woman's Auxiliary	250.00
Iowa Federation of Women's Clubs	25.00
American Cancer Society	100.00
TOTAL	$675.00

1955-1956 ACHIEVEMENT AWARDS

A new year of Auxiliary work is here, and it is again our privilege to announce that the climax of the year's activities will be the awarding of Achievement Award certificates to the three Auxiliaries, in the respective divisions, that have done outstanding work in their communities.

Special emphasis will be placed on membership, organizing of neighboring counties that have lacked chapters, nurse recruitment, Future Nurses Clubs, TODAY'S HEALTH sales, mental health projects, publicity-public relations and many other worthwhile undertakings that are included in our national, state and county programs.

The Achievement Award Score Sheet will be sent to each Auxiliary in the very near future. It is your means of evaluating your organization's effectiveness, and it is the state Auxiliary's means of correlating progress as a whole.

Mrs. Lester R. Hegg
Mrs. Edward Grossmann
Committee Members

Again this year, President Eisenhower will participate in a campaign for safe driving from November 30 to December 1, culminating in "S-D Day" (safe driving day). We are asked to offer our services to local safety groups in our communities.

Clay County

The Woman's Auxiliary to the Clay County Medical Society sponsored its first craft and hobby sale this fall at the Clay County Fair, for the benefit of handicapped persons from all over the state. The Auxiliary had space in the township booths and was aided by members from the entire third district. Mrs. E. E. Munger, Jr., is chairman of the Craft and Hobby Sales Committee, and Mrs. Dean King is co-chairman.

Mrs. Herbert Merillat, of Des Moines, and Mrs. Lester Hegg, of Rock Valley, directed the setting up of the exhibit and assisted with the first day's sales. Mrs. Frank Edington, of Spencer, the Clay County president, chose Mrs. Joseph King, of San Antonio, Texas, to be week-long supervisor of sales and assigned Monday to Sioux County, Tuesday to O'Brien County, Wednesday to Palo Alto County, Thursday to Emmet County, Friday to Osceola County and Saturday to Clay County.

The Clay County Auxiliary also maintained its booth on nurse recruitment and health in the Health Building at the fair.

* * *

The Future Nurse Club of the Spencer High School has been active during the summer. Members of the organization aided at the Crippled Children's Clinic conducted at the Bethany Lutheran Church there, furnishing toys, running errands, serving lunch to parents and children, and providing entertainment for the children throughout the day.

Mahaska County

The Mahaska County Auxiliary met at the Helen Perkins Dining Room at Oskaloosa recently to make plans for the coming year. Mrs. George Atkinson, president, conducted the business meeting.

Mrs. Sidney Smith, TODAY'S HEALTH chairman, made a report, and plans were made for future sales. The collection of sewing material to be sent to the state Committee for the Handicapped was discussed.

Mrs. F. O. Voigt was appointed historian to fill the vacancy created by the resignation of Mrs. C. E. Swanger.

The date of the next polio shots was announced, and those who assisted before volunteered to do so again.

Wapello County

At a dinner meeting of the Wapello County Auxiliary held recently in the home of Mrs. Wilson Wolfe, at Ottumwa, 23 members were present. The Auxiliary voted to give $25 to the Community Chest, discussed a fund to aid needy nursing students and heard a report on current legislation.

Mrs. L. A. Taylor and Mrs. Dennis Emanuel assisted the hostess.



NEWS AND VIEWS

The average youngster between the ages of 7 and 13 spends 20 to 30 hours per week watching T-V, according to the September 2 issue of U.S. NEWS AND WORLD REPORT.

The magazine quotes the following questions and statements from parents:

"What can you do to get a child to read when T-V takes so much of his time and satisfies his desire for thrills and adventure?"

"Most programs are grossly inappropriate for children and give them a fantastic and unreal picture of the world."

"Exposure to a reasonable amount of T-V does increase vocabulary, word recognition and general knowledge and understanding."

"The casual display of crime, sex and anger is an insidiously evil force, and this generation is bound to suffer morally."

"A great number of health authorities suspect that the worst effects of T-V on children are indirect: it keeps them from play such as baseball and hopscotch, which help exercise and develop their eyes and aid in the coordination between eyes, hands and feet."

Send vital statistics notices to Mrs. A. O. Wirsig, Shenandoah, chairman of the Courtesy Committee. Press clippings should be mailed to Mrs. Homer Wichern, 3711 Forest Avenue, Des Moines 11. Please send your news of Auxiliary meetings and other activities to Mrs. Edw. B. Hoeven, 224 E. Alta Vista, Ottumwa. Mail no later than the seventh of the month for publication the following month.

Mrs. Charles Flynn, president, and Mrs. Dean King, president elect, will attend the fall conference for such officers to be held at the Drake Hotel, in Chicago, November 1 to 3. With the other conferees, they will be guests of Mrs. Mason G. Lawson, of Little Rock, the national president, and Mrs. Robert Flanders, of Manchester, N. H., national president elect, in their suite at the Drake on November 1, from 5:30 until 7:00 p.m.



Miss Carolyn Mueller, Mr. Ray Stewart and Miss Tina Preftakes, who compose the Iowa State Medical Society's television staff are shown here conferring on what parts of a moving picture film can best be used as parts of a program in their new series, "Medical Diary."

ISMS BEGINS NEW TV SERIES

On September 15, the Iowa State Medical Society inaugurated a new series of television programs over WOI-TV, Ames. The new programs, collectively titled "Medical Diary," began with a half-hour discussion of poliomyelitis, in which Dr. F. H. Top, of SUI, and Dr. R. H. McBride, of Sioux City, were the physician participants. The second program, September 22, on heart disease, featured Dr. H. B. Weinberg, of Davenport, and the third, September 29, presented Dr. G. D. Phelps, of Waterloo, in a discussion of glaucoma. Each of these programs will be broadcast later over stations KCRG-TV, Mason City; KGLO-TV, Cedar Rapids; and KTIV-TV, Sioux City. For days and hours, viewers are asked to follow the listings under Speakers' Bureau Schedules in this and succeeding issues of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

The content of the broadcasts will be quite similar to that of the preceding series, "Your Health." Miss Tina Preftakes, of the State Society's staff, will continue to write the continuities, and the director and principal interlocutor will continue to be Mr. Ray Stewart, the public relations director for the Society and for Iowa Medical Service. But a greater flexibility will be achieved through filming physicians at work in their own offices and laboratories, rather than photographing them in sets made up to look like offices in the studios of the television station.

And a share in the interviewing is being given to an individual who is new to the Medical Society's TV broadcasts, Miss Carolyn Mueller. Miss Mueller is a graduate of the University of Missouri, where she majored in speech and drama, with particular emphasis on television work, and participated in programs broadcast from there. She is a member of the personal service staff of Younker Brothers' Des Moines store and is doing television work concurrently for that employer.

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair	L. H. Ahrens, Fontanelle	A. Jay Gantz, Greenfield	A. S. Bowers, Orient
Adams	C. L. Bain, Corning	J. C. Nolan, Corning	J. C. Nolan, Corning
Allamakee	R. R. Jeffries, Waukon	D. W. Dohnalek, Waukon	D. W. Dohnalek, Waukon
Appanoose	G. L. Richey, Centerville	C. H. Mitchell, Cincinnati	E. F. Ritter, Centerville
Audubon	P. E. James, Audubon	R. L. Bartley, Audubon	L. E. Jensen, Audubon
Benton	L. W. Koontz, Vinton	N. C. Knosp, Belle Plaine	N. C. Knosp, Belle Plaine
Black Hawk	I. R. Powers, Waterloo	J. S. LePoidevin, Waterloo	C. D. Ellyson, Waterloo
Boone	G. H. Sutton, Boone	A. W. Puntenney, Boone	R. L. Wicks, Boone
Bremer	R. E. Shaw, Waverly	R. P. Hardwig, Waverly	F. R. Sparks, Waverly
Buchanan	J. F. Loeck, Independence	J. W. Barrett, Jr., Independence	P. J. Leehey, Independence
Buena Vista	P. W. Brecher, Storm Lake	T. E. Shea, Storm Lake	T. E. Shea, Storm Lake
Butler	M. D. Enna, Dumont	F. F. McKean, Allison	F. F. McKean, Allison
Calhoun	W. W. Weber, Pomeroy	W. Ashton McCrary, Lake City	G. S. Rost, Lake City
Carroll	P. D. Anneberg, Carroll	J. M. Tierney, Carroll	J. R. Martin, Carroll
Cass	D. E. Wilcox, Atlantic	E. M. Juel, Atlantic	R. M. Needles, Atlantic
Cedar	H. E. O'Neal, Tipton	O. E. Kruse, Tipton	H. E. O'Neal, Tipton
Cerro Gordo	D. W. Clapsaddle, Clear Lake	R. C. Brown, Mason City	H. G. Marinos, Mason City
Cherokee	C. L. Seaman, Cherokee	H. J. Fishman, Cherokee	D. E. Koser, Cherokee
Chickasaw	P. C. Richmond, New Hampton	E. B. Becker, New Hampton	M. J. McGrane, New Hampton
Clarke	C. R. Harken, Osceola	G. I. Armitage, Osceola	G. I. Armitage, Osceola
Clay	C. C. Jones, Spencer	E. E. Munger, Spencer	C. C. Jones, Spencer
Clayton	E. G. Kettelkamp, Monona	J. D. Lyon, McGregor	P. R. V. Hommel, Elkader
Clinton	J. E. O'Donnell, Clinton	R. O. Emmons, Clinton	V. W. Petersen, Clinton
Crawford	D. N. Crabb, Denison	R. A. Huber, Charter Oak	R. M. Johnson, Denison
Dallas-Guthrie	W. A. Seidler, Jr., Jamaica	W. C. Wildberger, Perry	A. G. Felter, Van Meter W. A. Seidler, Jr., Jamaica
Davis	C. D. N. Gilfillan, Bloomfield	W. D. Haufe, Bloomfield	H. J. Gilfillan, Bloomfield
Decatur	W. N. Doss, Leon	E. E. Gamet, Lamoni	E. E. Gamet, Lamoni
Delaware	W. J. Willett, Manchester	Mary Ann Croker, Manchester	R. E. Clark, Manchester
Des Moines	R. F. Moerke, Burlington	R. A. Vercio, Burlington	J. F. Foss, Burlington
Dickinson		Ruth F. Wolcott, Spirit Lake	Ruth F. Wolcott, Spirit Lake
Dubuque	A. C. Pfohl, Dubuque	J. W. Moberly, Dubuque	D. F. Ward, Dubuque
Emmet	D. E. Wolters, Estherville	C. V. Lindholm, Armstrong	E. K. Vauble, Estherville
Fayette	J. P. Gallagher, Oelwein	R. S. Jaggard, Oelwein	A. F. Grandinetti, Oelwein
Floyd	T. G. Baumann, Charles City	R. A. Fox, Charles City	E. V. Ayers, Charles City
Franklin	W. W. Taylor, Sheffield	A. P. Smith, Hampton	W. L. Randall, Hampton
Fremont		A. R. Wanamaker, Hamburg	A. R. Wanamaker, Hamburg
Greene	W. E. Chase, Rippey	J. I. Limburg, Jr., Jefferson	E. D. Thompson, Jefferson
Grundy	W. K. Kienzle, Wellsburg	L. E. Frink, Reinbeck	E. A. Reedholm, Grundy Center
Hamilton	J. L. Ptacek, Webster City	D. C. Anderson, Stanhope	W. B. McGahey, Webster City
Hancock-Winnebago	A. H. Dulmes, Klemme	J. T. Enggas, Britt	T. J. Irish, Forest City
Hardin		F. N. Cole, Iowa Falls	L. F. Parker, Iowa Falls
Harrison	B. E. Kenney, Woodbine	F. X. Tamisiea, Missouri Valley	A. C. Bergstrom, Missouri Valley
Henry	J. G. Widmer, Wayland	P. G. Couchman, Mt. Pleasant	W. H. Megordon, Mt. Pleasant
Howard	D. O. Maland, Cresco	P. A. Nierling, Cresco	P. A. Nierling, Cresco
Humboldt	R. W. Beardsley, Livermore	J. H. Coddington, Humboldt	I. T. Schultz, Humboldt
Ida	E. H. Heilman, Ida Grove	J. B. Dressler, Ida Grove	M. W. Grubb, Galva
Iowa	D. A. Paulsen, Victor	I. J. Sinn, Williamsburg	C. F. Watts, Marengo
Jackson	F. J. Swift, Jr., Maquoketa	L. B. Williams, Maquoketa	
Jasper	L. H. Koelling, Newton	L. D. Norris, Newton	J. W. Ferguson, Newton
Jefferson	F. H. McClurg, Fairfield	C. L. Palcheff, Fairfield	J. W. Castell, Fairfield
Johnson	R. C. Hardin, Iowa City	J. S. Greenleaf, Iowa City	E. J. Boyd, Iowa City
Jones	T. M. Redmond, Monticello	R. W. Myers, Monticello	T. M. Redmond, Monticello
Keokuk	E. R. Gann, Sigourney	R. G. Gillett, Sigourney	R. G. Gillett, Sigourney
Kossuth	D. L. Bray, Algona	J. M. Schutter, Algona	M. G. Bourne, Algona
Lee	G. H. Ashline, Keokuk	Sebastian Amberry, Keokuk	J. H. Ashline, Keokuk R. L. Feightner, Ft. Madison
Linn	L. J. Halpin, Cedar Rapids	K. W. Woodhouse, Cedar Rapids	H. J. Jones, Cedar Rapids
Louisa	J. H. Chittum, Wapelo	K. T. DeYarman, Morning Sun	L. E. Weber, Wapello
Lucas	R. C. Gutch, Chariton	R. E. Anderson, Chariton	A. L. Yocom, Chariton
Lyon	H. H. Gessford, George	S. H. Cook, Rock Rapids	S. H. Cook, Rock Rapids
Madison	R. W. Carson, Winterset	J. E. Evans, Winterset	J. E. Evans, Winterset
Mahaska	G. W. Bennett, Oskaloosa	R. L. Alberti, Oskaloosa	G. S. Atkinson, Oskaloosa
Marion	K. D. Banks, Knoxville	T. D. Clark, Knoxville	H. L. Bridgeman, Knoxville
Marshall	O. D. Wolfe, Marshalltown	H. E. Sauer, Marshalltown	R. C. Carpenter, Marshalltown
Mills	W. A. DeYoung, Glenwood	T. E. Shonka, Malvern	M. L. Scheffel, Malvern
Mitchell	M. O. Eiel, Osage	R. J. Smith, Stacyville	T. E. Blong, Stacyville
Monona	P. G. Ingham, Mapleton	P. L. Wolpert, Onawa	C. W. Young, Onawa
Monroe	F. N. Bay, Albia	D. N. Orelup, Albia	D. N. Orelup, Albia
Montgomery	S. R. Smith, Red Oak	G. M. Skallerup, Red Oak	E. L. Croxdale, Villisca
Muscatine	V. W. Swayze, Muscatine	Samuel Bluhm, Muscatine	K. E. Wilcox, Muscatine
O'Brien	I. E. Brown, Hartley	W. S. Balkema, Sheldon	E. B. Getty, Primghar
Osceola	F. B. O'Leary, Sibley	J. H. Thomas, Sibley	F. M. Rizzo, Sibley
Page	R. A. Powell, Shenandoah	K. V. Jensen, Clarinda	K. J. Gee, Shenandoah
Palo Alto	J. R. Hyde, Emmetsburg	C. C. Moore, Emmetsburg	H. L. Brereton, Emmetsburg
Plymouth	H. L. Vander Stoep, LeMars	F. C. Bendixen, LeMars	H. L. Vander Stoep, LeMars
Pocahontas	E. O. Loxterkamp, Rolfe	C. L. Jones, Gilmore City	C. L. Jones, Gilmore City
Polk	D. C. Wirtz, Des Moines	T. A. Bond, Des Moines	M. T. Bates, Des Moines
Pottawattamie	W. O. Griffith, Council Bluffs	I. J. Hanssmann, Council Bluffs	C. V. Edwards, Council Bluffs
Poweshiek	T. V. Niemann, Brooklyn	L. C. Hickerson, Brooklyn	T. V. Niemann, Brooklyn
Ringgold		J. W. Hill, Mt. Ayr	E. J. Watson, Diagonal
Sac	J. W. Gauger, Early	John Hubiak, Odebolt	C. E. Lierman, Lake View
Scott	J. R. Shorey, Davenport	A. B. Hendricks, Davenport	T. W. McMeans, Davenport
Shelby	J. H. Spearing, Harlan	R. E. Donlin, Harlan	J. H. Spearing, Harlan
Sioux	E. N. Eneboe, Hawarden	C. B. Murphy, Alton	M. O. Larson, Hawarden
Story	G. J. Hegstrom, Ames	K. C. Piercy, Ames	J. D. Conner, Nevada
Tama	L. G. Schaeferle, Gladbrook	A. J. Havlik, Tama	A. J. Havlik, Tama
Taylor	R. W. Boulden, Lenox	G. W. Riml, Bedford	R. W. Boulden, Lenox
Union	R. H. Kuhl, Creston	H. J. Peggs, Creston	
Van Buren	Kiyoshi Furumoto, Keosauqua	J. T. Worrell, Keosauqua	Kiyoshi Furumoto, Keosauqua
Wapello	J. B. Roberts, Ottumwa	E. B. Hoeven, Ottumwa	P. D. McIntosh, Ottumwa
Warren	C. A. Trueblood, Indianola	R. C. McGeehon, Indianola	C. A. Trueblood, Indianola
Washington	T. M. Mast, Washington	W. S. Kyle, Washington	G. E. Montgomery, Washington
Wayne	L. B. Calbreath, Humeston	C. F. Brubaker, Corydon	D. R. Ingraham, Sewal
Webster	E. B. Dawson, Ft. Dodge	J. F. Vincent, Ft. Dodge	C. J. Baker, Ft. Dodge
Winneshiek	Garfield Miller, Calmar	D. W. Wright, Decorah	E. F. Hagen, Decorah
Woodbury	P. L. Bettler, Sioux City	V. R. Heimann, Sioux City	D. B. Blume, Sioux City
Worth	R. L. Olson, Northwood	C. T. Bergen, Northwood	R. L. Olson, Northwood
Wright	R. A. Young, Clarion	J. R. Christensen, Eagle Grove	S. P. Leinbach, Belmond

The Month in Washington

Washington, D. C.—Although Salk vaccine now is coming from the laboratories in encouraging volume, in Washington there still are unresolved questions that may well go beyond the problem of controlling poliomyelitis.

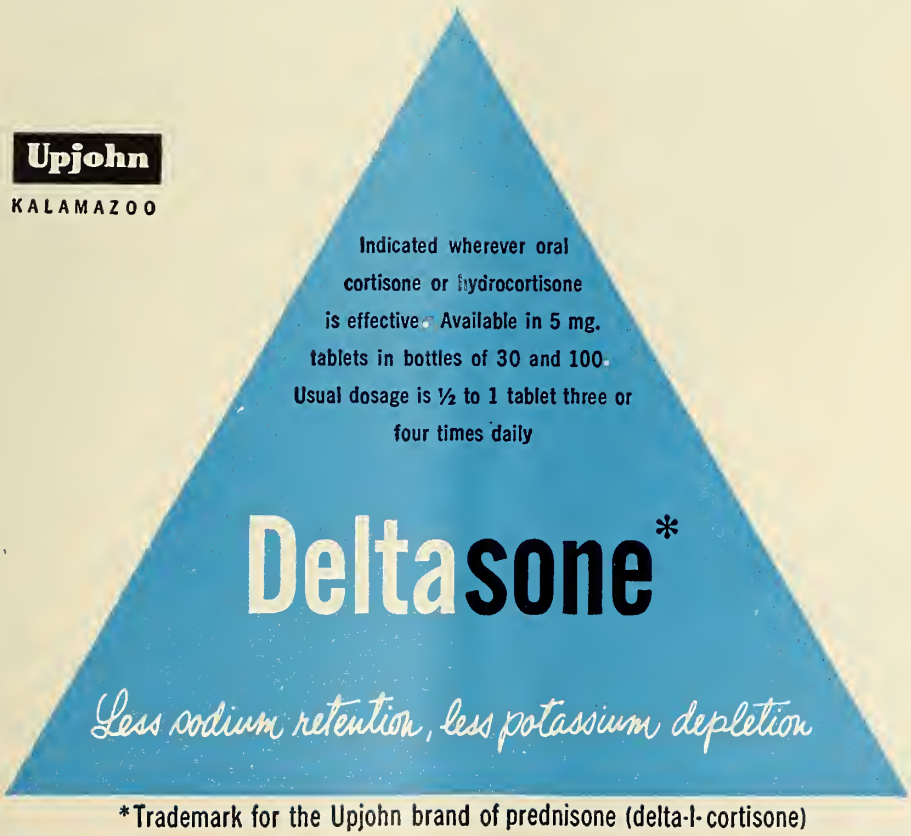
After months of wrangling, Congress this year enacted only one law dealing with the new vaccine. This was an authorization for the allocation of money to states to help finance inoculation campaigns. On this there was a sharp difference of opinion. Some lawmakers wanted to give federal money, but to earmark it for the exclusive use of children who had passed the "means test," that is, whose parents had been officially determined to be unable to pay for the shots. Others would have nothing to do with a bill carrying the "means test."

As finally enacted, the law provides enough money to buy vaccine for only approximately one-third of all children under 20 and pregnant women. That is a concession to those who want a "means test." But the "no-means test" faction was appeased by another provision of the law, a stipulation that in inoculation programs arranged by the state and communities no financial questions could be asked.

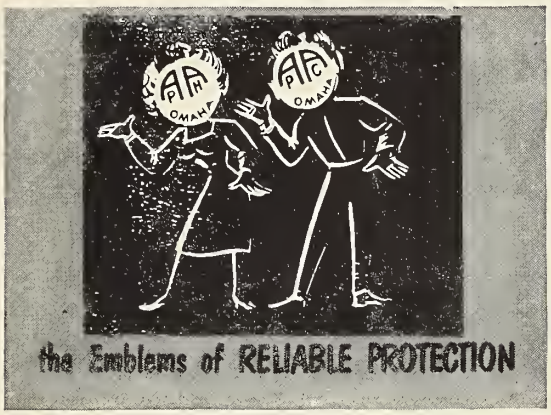
It may be that this decision will be final, that Congress will have nothing more to do with this complicated problem, except possibly to add to the 30 million dollars already appropriated to pay for vaccine. But that isn't the way some members of Congress feel. They want to reopen the entire question before the present law expires next February 15. At the very least, these Senators and Representatives want Congress to vote enough money to buy shots for all children in the eligible ages. In fact, those who want the federal government to play a larger role in inoculation programs regard the law now on the books as merely a temporary measure. They are looking forward to reopening the issue.

If this is done, the many questions that the last session couldn't decide again will be before Congress. Here are some of them:

1. Is it the responsibility of the federal government to make free shots available to all, regardless of ability to pay?
2. If there is to be a "means test," should the states or the federal government set the dividing line between the families that can pay and those that can't?
3. Should the federal government move into the picture and allocate the available vaccine, or should distribution continue along the present voluntary lines?
4. Should the states and communities arrange for all inoculations themselves?



WE CORDIALLY INVITE YOUR INQUIRY for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your eligible dependents.



SINCE 1902

ALL PREMIUMS COME FROM

PHYSICIANS SURGEONS DENTISTS

ALL BENEFITS GO TO

$4,500,000 ASSETS
$22,500,000 PAID FOR BENEFITS

PHYSICIANS CASUALTY AND HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

Underlying these questions are some issues that go beyond Salk Vaccine. Some persons in Congress believe there should be no limit to the participation of the federal government in public health programs. They would like to see free inoculations not only for poliomyelitis but also for all other communicable diseases for which there is a specific vaccine.

Also, the rambling system of federal control over drugs, with enforcement spread among half a dozen departments and agencies, is under criticism. Some leaders in Congress believe the whole area of federal drug control should be surveyed, and possibly more clear-cut lines of enforcement laid down. One bill on this subject—which was not pressed last session—would give the Secretary of the Department of Health, Education, and Welfare authority to move in and assume control over the distribution and even the use of any drug when the Secretary decided that the public welfare warranted such drastic action.

NOTES

During the current fiscal year, the U. S. will be spending a total of over 32 million dollars to help in vocational rehabilitation work, most of it in the form of grants to states.

In exchange for patent rights, colleges and laboratories will receive some financial concessions from the Atomic Energy Commission in purchase of nuclear materials and equipment.

From now on, Air Force physicians, when addressed verbally, will be called "doctor." The military rank and title will continue to be used, however, in written communications.

The Department of HEW's many medical research programs are being scrutinized by a special committee set up by the National Science Foundation. In originally suggesting the study, former HEW Secretary Hobby said the time had come to reevaluate the extent of federal medical research. Final findings will be turned over to HEW Secretary Marion B. Folsom.

GYNECOLOGY

A three-day postgraduate course in gynecology will be presented at the University of Kansas Medical Center in Kansas City early in November. Cystocele and retrocele are the topics for November 7; amenorrhea, for November 8; and endometriosis, for November 9. There will be no evening sessions. Tuition is $35.

The faculty is to consist of R. G. Douglas, M.D., of Cornell University; D. G. Morton, M.D., of U.C.L.A.; L. M. Randall, M.D., of the Mayo Foundation; R. B. Scott, M.D., of Western Reserve University; H. H. Ware, M.D., of the Medical College of Virginia; and L. A. Calkins, M.D., R. L. Newman, M.D., and Rosemary Schrepfer, M.D., of the University of Kansas.

Your Blue Shield President Reports:



As announced in the last issue of the JOURNAL, Iowa Medical Service is currently considering the addition of a second form of subscriber contract to its medical care program.

The provisions of our existing contract have remained fairly constant. We have had a substantial growth, and our financial position is satisfactory. But now there is need for a revision of the program and an expansion of benefits. The incentive for these changes has come from our own experience, from that of others in the same field, from the public and from participating physicians.

From the public have come requests for more nearly complete coverage of existing ills and for greater emphasis on diagnostic aids and prophylactic measures. From the practicing physicians have come a variety of suggestions, many of which have real merit. Among them are: more recognition for nonsurgical care by internists, general practitioners and other physicians; payment for more services performed in doctors' offices, particularly laboratory and other diagnostic ones; a more adequate and realistic fee schedule; special consideration for especially difficult and time-consuming medical care of hospitalized patients; expansion of coverage to include conditions and new methods of treatment not now covered; and application of the deductible feature in our contracts.

As a new contract is formulated, these and all other proposals will be given consideration by our Medical Advisory and Contract Committees, including our actuarial advisors. They will be judged in the light of our own experience and in that of the industry generally. Determining factors in the acceptance or rejection of each of them will probably be the anticipated claim incidence, the additional cost to the subscriber, and the feasibility of administration.

Sincerely,

Martin L. Olsen M. D.

President

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

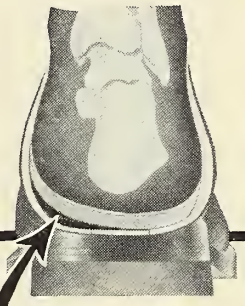
Starting Dates—Fall, 1955

SURGERY—Surgical Technic, Two Weeks, October 10, November 7
Surgical Technic, Surgical Anatomy & Clinical Surgery, Four Weeks, October 10
Surgical Anatomy & Clinical Surgery, Two Weeks, October 24
Surgery of Colon & Rectum, One Week, October 17, November 28
General Surgery, One Week, October 17
Gallbladder Surgery, Ten Hours, October 24
Fractures & Traumatic Surgery, Two Weeks, October 17
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, November 28
Vaginal Approach to Pelvic Surgery, One Week, November 7
OBSTETRICS—General & Surgical Obstetrics, Two Weeks, November 7
MEDICINE—Gastroenterology, Two Weeks, October 24
Electrocardiography & Heart Disease, Two-Week Basic Course, October 10
Gastroscopy, Forty-Hour Basic Course, November 7
Dermatology, Two Weeks, October 17
RADIOLOGY—Clinical Course, Two Weeks, by appointment
Clinical Uses of Radioisotopes, Two Weeks, October 10
PEDIATRICS—Clinical Course, Two Weeks, by appointment
UROLOGY—Two Week Course, October 10

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge at inner corner of heel where support is most needed.
- Special Supreme rubber heels are longer than most anatomic heels and maintain the appearance of normal shoes.
- The patented arch support construction is guaranteed not to break down.
- Innersoles are guaranteed not to crack, curl, or collapse. Insulated by a special layer of Texon which also cushions firmly and uniformly.
- Foot-so-Port lasts were designed and the shoe construction engineered with orthopedic advice.
- NOW AVAILABLE! Men's conductive shoes. N.B.F.U. specifications. For surgeons and operating room personnel.
- By a special process, using plastic positive casts of feet, we make more custom shoes for polio, club feet and all types of abnormal feet than any other manufacturer.

Write for details or contact your local **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

PERSONALS

Dr. James R. Tabor, a 1954 graduate of the College of Medicine at SUI, has opened a practice at Marion. He interned at the city hospital in Cleveland, Ohio.

After 18 months' military service on the island of Guam, **Dr. G. H. Powers** is now in Oakland, California. He plans shortly to resume his practice in Shenandoah.

The Des Moines-Polk County Health Department is moving from the City Hall to the Argonne Armory, at East First Street and Grand Avenue. The medical director, **Dr. Abraham Gelperin,** explained that at the new location, no more than a block from the City Hall, the divisions of his Department can occupy suites of rooms that are somewhat closer together. Later, it is possible that other branches of the city government will also be moved to the Armory.

At Vinton, **Dr. Martin Deakins** has been appointed to succeed **Dr. C. R. Scholl** as city physician. Dr. Scholl recently moved to Iowa City.

Dr. K. J. Kroack, who began a residency in surgery at the VA hospital in Fort Logan, Colorado, in July, has announced that he will return to practice in Buffalo Center in September. He was joined there by **Dr. J. O. Moermond,** who has been practicing for two years at Hull.

Dr. Forest J. Hall, an EENT specialist who has practiced 45 years at Webster City, retired six weeks ago. He and his wife are moving to Florida.

Dr. R. A. Lynberg, who resigned from the staff of the McVay Memorial Hospital in Lake City last June, opened an office in North Spokane, Washington, on August 1.

Following the completion of his internship at St. Mary's Hospital, Saginaw, Michigan, **Dr. William R. Wessels** has opened an office for medical practice in Marshalltown. He is a 1954 graduate of the College of Medicine at SUI.

Dr. Merwin R. Dieckman, who had been associated with **Dr. E. A. Reedholm** in Grundy Center only since August 1, was ordered to report at Great Lakes, Illinois, on August 25 to serve a two year tour in the Navy. He will be a lieutenant (jg) in the Reserve.

Equanil*

Meprobamate

(2-methyl-2-*n*-propyl-1 3-propanediol dicarbamate)

a new anti-anxiety factor

Appropriate to an age of mental and emotional stress,
EQUANIL has demonstrated remarkable properties for promoting
equanimity and release from tension,
without mental clouding.
EQUANIL is a pharmacologically unique anti-anxiety agent
with muscle-relaxing features.
Acting specifically on the central nervous system,
it has a primary place in the
management of patients with anxiety neuroses,
tension states, and associated conditions.[1,2]
In clinical trials, patients respond with ". . . lessening of tension,
reduced irritability and restlessness, more restful sleep,
and generalized muscle relaxation."[2]
It is a valuable adjunct to psychotherapy.
Clinical use is not limited by significant side-effects,
toxic manifestations, or withdrawal phenomena.[1,2]
Supplied: Tablets, 400 mg., bottles of 48.

Wyeth®
Philadelphia 2, Pa.

*Trademark

1. Selling, L.S.: J.A.M.A. 157: 1594 (April 30) 1955. 2. Borrus, J.C.: J.A.M.A. 157: 1596 (April 30) 1955.

Dr. A. E. Braley, head of the Department of Ophthalmology at SUI, announced in mid-August that the services of an eye bank would be available within a month at Iowa City to patients in need of corneal transplants.

Immediately after the 1955 General Assembly adopted legislation to permit bequests of parts of one's body the Lions Clubs of Iowa raised $6,000 for the foundation and support of the eye bank, and distributed donor cards by means of which members of the organization can pledge their eyes. Lists of donors will be kept at Iowa City and will be distributed to morticians throughout the state.

Two hundred patients in Marshalltown and vicinity and a number in and around Newton were stricken this past summer with a virus infection having symptoms resembling those of non-paralytic poliomyelitis. It lasts from two to seven days, with headache, nausea and stiffness of the head and neck. **Dr. R. H. Heeren,** director of the Division of Communicable Diseases at the State Department of Health, has said that it definitely is not poliomyelitis, but blood tests and other studies that are regarded as essential to the differential diagnosis haven't been completed.

The August, 1955, issue of MEDICAL TIMES contains an article on traffic accidents by **Drs. Walter D. Abbott** and **John T. Bakody,** Des Moines neurosurgeons. Physicians who attended the Polk County Medical Society's meeting at Mercy Hospital last Christmas will recognize it as the paper Dr. Bakody read on that occasion.

Drs. Abbott and Bakody stress the importance of having a doctor reach the accident scene before the victims are subjected to "further injury by a zealous, well-meaning but ill-informed Good Samaritan," and they express the hope that "the present emphasis on power will give way to an even greater emphasis on safety for the occupants of vehicles involved in accidents."

The pediatric outpatient department in the new $329,390 addition to University Hospitals, Iowa City, opened on August 15. The new structure will also house child psychiatry and other services.

In the commencement address that **Dr. W. B. Bean** delivered at SUI on August 10, he lamented the fact that the accumulation of data in the various scientific fields has put diversified knowledge beyond the reach of the student. And he warned against the easy assumption that amassing facts is the whole responsibility of the scientist. On the first of those points he observed that one of the tragic by-products of overspecialization has been the inability of the specialist to recognize his deficiencies outside his own field of endeavor. Apropos of the second, he said, "Too much science, so

SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 **Capacity 200 beds**

Under the Supervision of the Sisters of Mercy

An Institution for the Study and Treatment of Nervous and Mental Disorders.

Conditioned Reflex and Antabuse Therapy for Alcoholism

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director

JAMES D. MAHONEY, M.D., Associate Director **RICHARD B. LEANDER, M.D.**

called, is the accumulation of vast deserts of data, rarely connected by oases of prose, over which droves of thin-brained men lurch aimlessly back and forth on hobby horses, kicking up sand into our eyes." Dr. Bean is head of the University's Department of Internal Medicine.

Dr. Ralph W. Taraba, who has been assistant medical director for the last two years at the Iowa Ordnance Plant, in Burlington, has been named medical director of Delco Radio, in Kokomo, Indiana. Since he is himself a "ham" radio operator, he is certain to find his new associates congenial.

Dr. F. X. Tamesia, of Missouri Valley, underwent surgery during August at Immanuel Hospital, Omaha.

When the State University of Iowa College of Medicine was established as a medical department 85 years ago, the students were 27 men and 10 women, and the course consisted of two years of twenty weeks each. Nowadays there are 426 men and 9 women whose course of four thirty-six-week years must have been preceded by three years of liberal arts study.

Dr. R. Giles Gillett, of Sigourney, and **Dr. R. N. Larimer,** of Sioux City, composed the panel that discussed problems of overweight and underweight over WOI-TV, Ames, on the "Your Health" program of September 1.

Dr. Emery Rust, a Life Member of ISMS, who has practiced at Webb for 50 years, was guest of honor at "Dr. Rust Day" in that community on September 7.

Dr. L. R. Fuller, a 1954 graduate of the College of Medicine at SUI, opened a solo practice at Garner on September 1. He interned while in the Army, at Madigan General Hospital, Tacoma, Washington. His three previous years of military duty were during World War II.

Appointment of **Dr. J. F. Edwards** as roentgenologist at Mercy Hospital, Clinton, was announced on August 25. He is a medical graduate of Loyola University, Chicago, and did work at Northwestern University and Cook County Graduate School of Medicine to prepare himself for his specialty.

Dr. K. D. Rodabaugh, of Tabor, has installed an automatic telephone-answering and message-taking device. When the doctor is absent, a recorded voice tells those who phone him when he will re-

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets
(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

SHARP & DOHME
Philadelphia 1, Pa.
Division of Merck & Co., Inc.

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

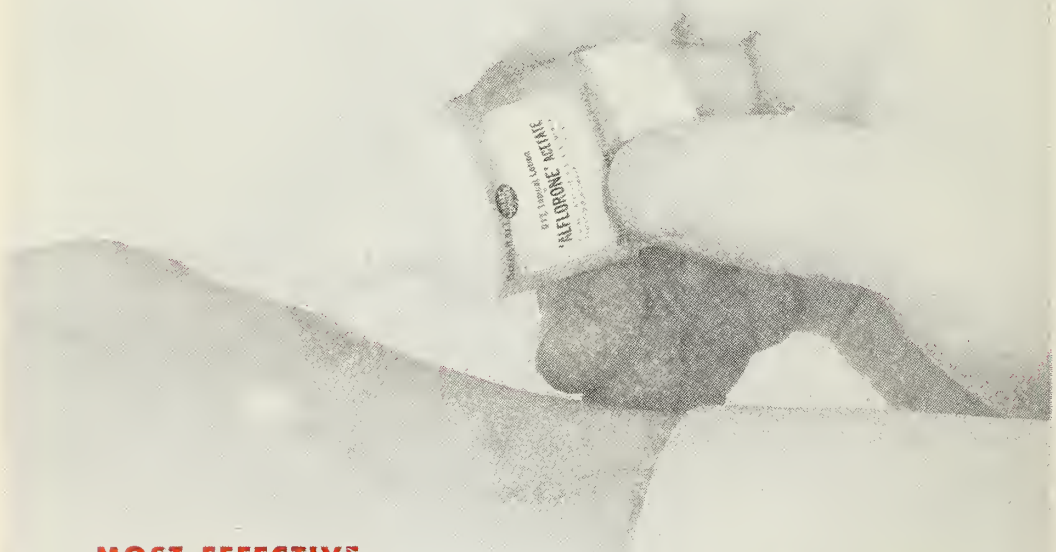
WEIGHT FOR WEIGHT,
THE MOST ACTIVE ANTI-INFLAMMATORY
AGENT YET DEVELOPED
FOR TOPICAL USE

TOPICAL LOTION

'ALFLORONE'

ACETATE

(FLUDROCORTISONE ACETATE, MERCK) 9 ALPHA-FLUOROHYDROCORTISONE ACETATE



MOST EFFECTIVE
Therapeutically active in 1/10th the concentration of hydrocortisone (Compound F).

MOST ECONOMICAL
Superior spreading qualities—a small quantity covers a wide area.

MOST ACCEPTABLE
Most patients prefer the cosmetic advantages of this easy-to-apply, smooth spreading lotion.

Supplied: Topical Lotion Alflorone Acetate: 0.1% and 0.25%, in 15-cc. plastic squeeze bottles. Topical Ointment Alflorone Acetate: 0.1% and 0.25%, 5-Gm., 15-Gm., and 30-Gm. tubes.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

turn and invites them to dictate messages. If in any instance the recitation of symptoms or whatever takes longer than twenty seconds, the prospective patient is cut off and must dial over again to add a "second page" to his account. Similar gadgets are in use at Council Bluffs and Omaha.

Dr. Edwin T. Thorsness, a pathologist who has served all three hospitals at Dubuque for ten years, has moved to Pikesville, Kentucky, where he will engage in research at Methodist Hospital.

Dr. Douglas Bradshaw, a Fort Dodge pediatrician, moved early in September to Grant's Pass, Oregon, where he will join the Grant's Pass Clinic.

There is a hospital within 20 miles of every town in Iowa, and there are now only six towns with populations above 1,000 that have no resident physicians. Those towns are Camanche, in Clinton County; Carter Lake, in Pottawattamie County; Le Claire, in Scott County; Mystic, in Appanoose County; Tripoli, in Bremer County; and Wilton Junction, in Muscatine County.

Dr. J. D. Mahoney, a Council Bluffs psychiatrist, participating in panel discussions on sex crimes and criminals, sponsored by the Iowa State Medical Society on WOI-TV, Ames, August 25, declared, "We can't permit our children to grow up in a sheltered world. If parents don't put too much stress on [the possibility of being attacked] the child won't."

The program was, in part at least, a reply to a previous telecast in which a speaker had suggested to parents that they instruct their youngsters to scream at the tops of their lungs whenever they were spoken to by adult strangers. Though Dr. Mahoney granted that some sexual psychopaths are released from mental institutions too soon, he expressed the opinion that an exaggerated fear of molestation is harmful.

Dr. E. E. Peters, a graduate of the College of Medical Evangelists, in Los Angeles, who practiced previously in Wisconsin, has associated himself with **Drs. V. W. Swayze** and **O. S. Keiser** at Muscatine.

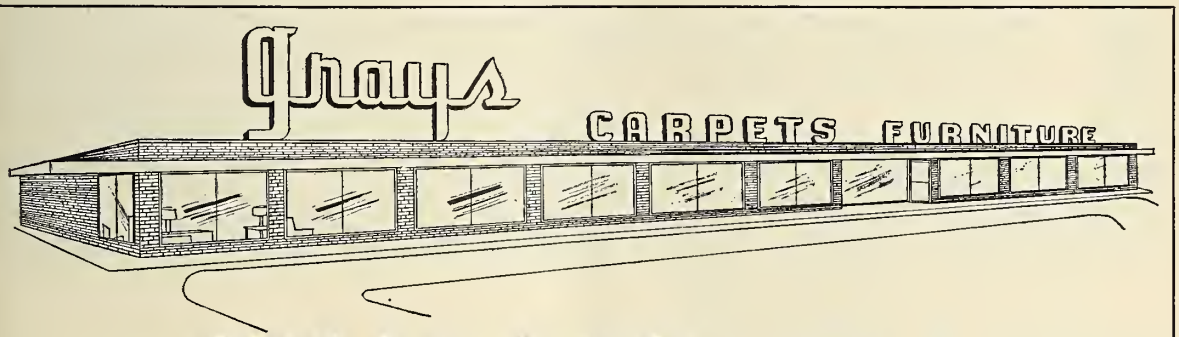
After practicing at Muscatine for 23 years, **Dr. P. M. Jessup** has retired and has moved to Westfield, Indiana, a suburb of Indianapolis, where he plans to raise purebred Hereford cattle on a 131-acre farm.

Dr. Robert G. Hickey, associate professor of surgery at SUI, has been named Assistant Dean for Research. In the newly created post, Dr. Hickey will be responsible for the coordination and administration of more than 200 teaching and research grants and research fellowships. His duties as assistant dean will be in addition to his teaching. Dr. Hickey joined the staff at the SUI College of Medicine in 1951.

Dr. Janis Straumanis, who has been practicing for the past year at Riverside, has announced that he is moving to Solon.

Dr. Lowell Peck, of Wellsburg, underwent surgery on Labor Day at the Grundy County Memorial Hospital.

Dr. Frederick G. Murray, a Life Member of the Iowa State Medical Society, suffered a fractured knee cap and scalp cuts in a two-car automobile



OPEN DAY & NITE – 9 to 9
OPEN SUNDAYS – 1 to 6 P.M.

GRAYS - *Furniture - Carpeting*

5035 HUBBELL AVENUE
MANY MONTHS TO PAY

Iowa's Largest Flexsteel Showroom

"JUST OUTSIDE DES MOINES"
FREE DELIVERY IN IOWA

In a Filter Cigarette... it's the Filter You Depend on



The VICEROY filter tip contains 20,000 tiny filter traps, made through the solubilization of pure natural material. This is twice as many of these filter traps as any other brand.

We believe this simple fact is one of the principal reasons why so many doctors smoke *and* recommend VICEROY—the cigarette you can *really* depend on!



accident 22 miles west of Cedar Rapids on September 1. His wife and another lady passenger in the car were less seriously injured. The mishap occurred as Dr. Murray was making a left turn into a cafe driveway.

Dr. L. B. Amick, of Sac City, has been receiving treatment and care at Loring Hospital there. Early in September he had a heart attack so serious that his four physician sons were summoned, but since then his condition has improved.

At Mason City, **Dr. John S. Koch,** a 1954 graduate of the College of Medicine at SUI, has begun practice with Surgical Associates. He interned at General Hospital, Fresno, California.

Dr. John L. Lesiak, late of Sumner and whom last month's JOURNAL reported as having moved to Buffalo Center, has announced that he will begin practice in Titonka on October 1.

Dr. William D. Garred, who practiced at Dow City from 1951 to 1953, was released from Army Service on August 5 and opened an office at Onawa on September 12.

One of Boone's veteran physicians, **Dr. R. E. Gunn,** was guest of honor at a testimonial dinner at the Lincoln Restaurant there on September 7. He was given an award of merit by the Boone County Medical Society which described him as a "beloved family physician." Dr. Gunn has practiced at Boone since 1922 and has been city physician since 1939.

The Iowa Clinical Surgery Society met at Ottumwa on September 10.

Dr. Emma M. Ackerman, who passed the forty-second anniversary of her entry into medical practice last May, closed her office in Sioux City last month.

Having completed his tour of military duty as a recruiting officer in Des Moines, **Dr. D. S. Reading** has resumed his residency in surgery at Iowa City.

Dr. J. Fred Throckmorton, of Des Moines, is closing his downtown office, but intends to continue practicing at his residence.

Dr. Tom D. Throckmorton, a Des Moines surgeon, has been elected to the Blue Shield Board of Directors to succeed **Dr. Ransom D. Bernard,** of Ames, who resigned because of ill health. **Dr. Ben T. Whitaker,** a Boone radiologist and a former president of the Iowa State Medical Society, was appointed to replace Dr. Bernard on the Blue Cross Board of Directors. Dr. Bernard had been a

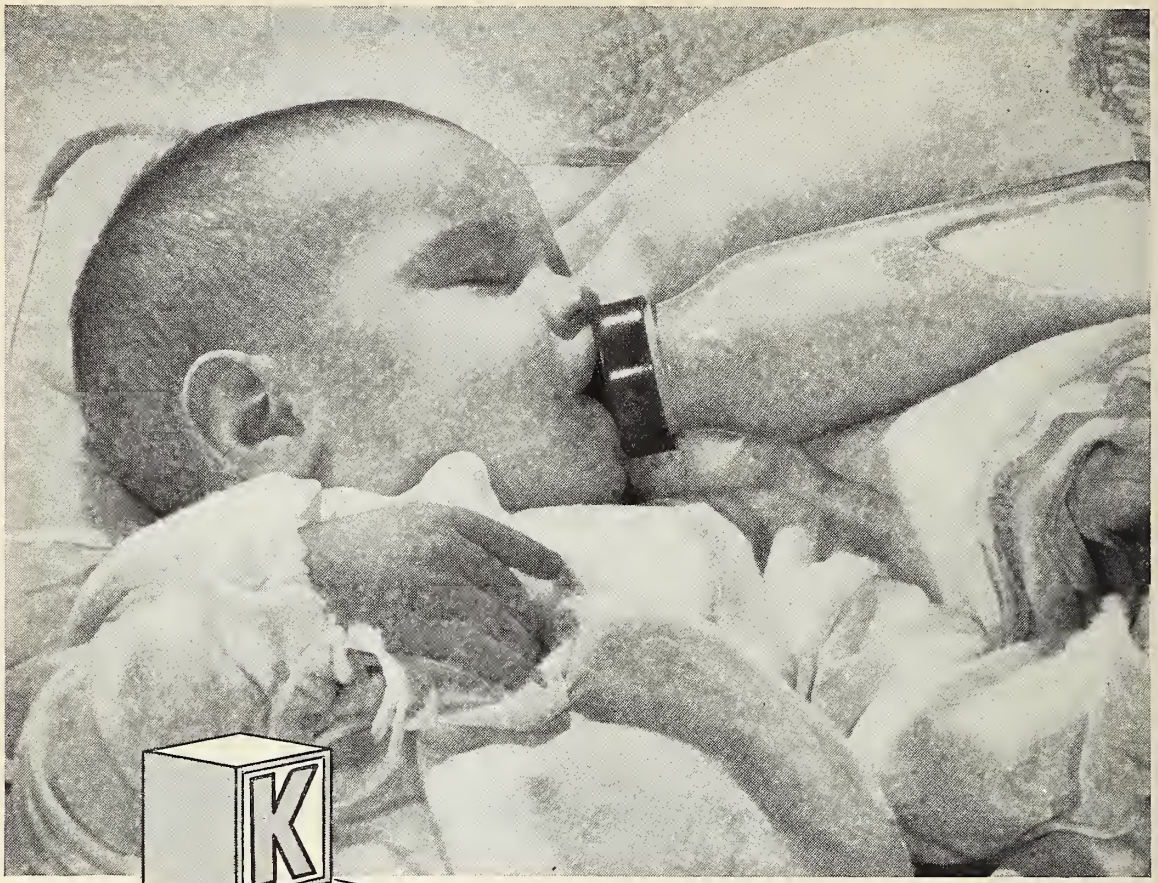
1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 'Hydeltra'

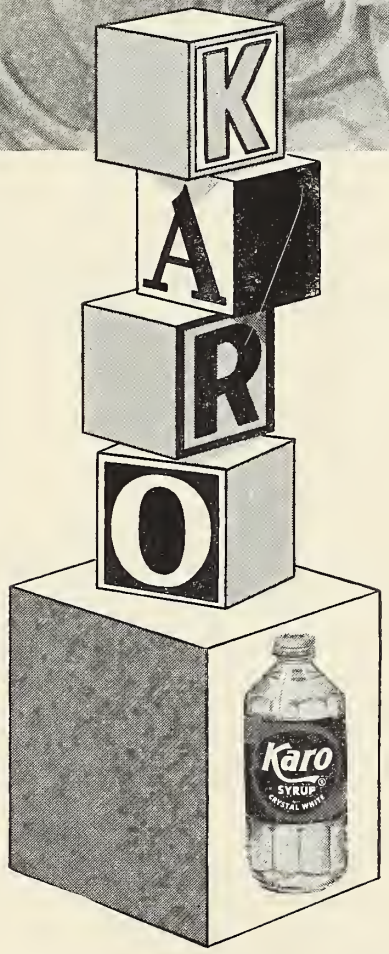
DELTRA® tablets
(Prednisone, Merck)
2.5 mg. - 5 mg. (scored)

the delta$_1$ analogue of cortisone

Indications:
Rheumatoid arthritis
Bronchial asthma
Inflammatory skin conditions

SHARP & DOHME
Philadelphia 1, Pa.
Division of Merck & Co., Inc.





The individualized formula is the foundation of the infant's health and future development

For 3 generations KARO has been the foundation of the individualized formula

Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized. It is a balanced fluid mixture of maltose, dextrins and dextrose readily soluble in fluid whole or evaporated milk. *Precludes* fermentation and irritation. Produces no intestinal reactions. Is hypo-allergenic. Bacteria-free Karo is safe for feeding prematures, newborns, and infants—well and sick.

Light and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

member of both executive bodies since their establishment.

Eight Des Moines physicians were interviewed recently by a representative of the AMA as a final portion of a study to determine the future curriculum in schools that train doctors' aides. Several assistants in Des Moines doctors' offices were surveyed earlier. The city is one of four that were selected for the purpose.

Dr. Richard D. Berge, a 1954 graduate of the College of Medicine at SUI, has begun practice in Aurelia.

GERONTOLOGY INSTITUTE AT IOWA CITY

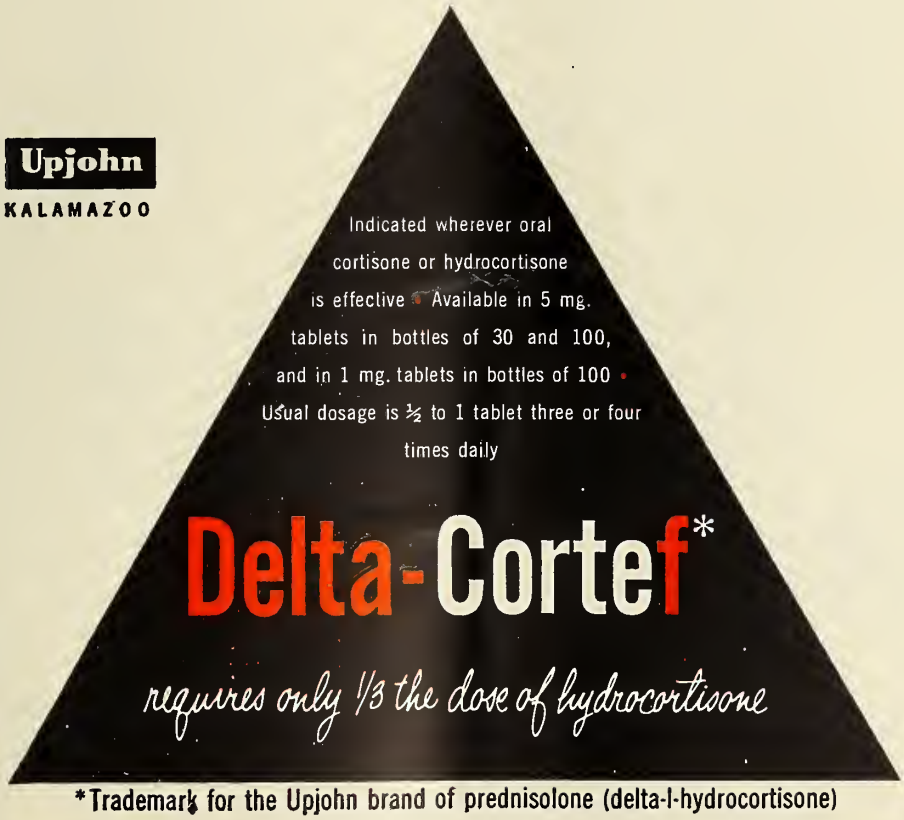
The fourth annual conference of the Institute of Gerontology will be held at the State University of Iowa, October 10-11, the general theme being "Retirement and the Effective Utilization of the Older Worker." The speakers will include Dr. F. H. Top, professor and head of the Division of Hygiene and Preventive Medicine at SUI; Dr. L. E. January, professor of internal medicine there; Steven M. Horvath, Ph.D., professor of physiology and acting head of the Institute of Gerontology; Mr. Howard Hill, president of the Iowa Farm Bureau Federation; Mr. Adolph Berger, of the U. S. Bureau of Labor Statistics; and Messrs. Warner Bloomberg, Jr. (social science) and Robert L. Peterson (business management), of the University of Illinois.

CIBA STARTS MEDICAL NEWSPAPER

MEDICAL NEWS, the first newspaper exclusively for the medical profession, began publication on September 12. Ciba Pharmaceutical Products Co. will distribute the eight-page, tabloid-size publication free of charge to physicians every other week.

The newspaper is designed to provide the busy practitioner with brief, authoritative news and feature articles on current medical developments in this country and abroad. The editorial content will be determined independently of Ciba's interest as a pharmaceutical manufacturer.

The editor, Mr. Blake Cabot, is a graduate of Harvard University and the author of THE MOTION OF THE HEART, a book on cardiovascular research. He was previously director of publications for the Greater New York Fund and has performed public relations work for the American Heart Association.



BLOOD DIAGNOSTIC REAGENTS

30-102—**Blood Grouping Serum** (Set Anti-A and Anti-B). 2 cc. of each.....Set $2.00
30-105—**Blood Grouping Serum** (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—**Anti-A, B (Group O) Blood Grouping Serum,** 5 cc. .....Each 2.50
32-102—**Anti-RHo. (Anti-D) Typing Serum,** (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—**Anti-RHo. (Anti-D) Typing Serum,** (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—**Physiological Salt Solution,** 100 cc. .....Case of 100 35.00
51-100—**Distilled Water** (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—**Dextrose Injection 50%.** 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
223 Locust Street Telephone 2-6766
Des Moines 9, Iowa

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for information
MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa
Thursday at 11:15 a.m.
"MEDICINE, U.S.A."

October 6 ..... A Matter of Perspective
October 13 ..... Excuse for Not Living
October 20 ..... Recovery
October 27 ..... There's No Fool

WSUI—Iowa City, Iowa
Tuesday at 11:45 a.m.
"HEART OF AMERICA"

October 4 ..... What's a Heart Murmur
October 11 ..... Rheumatic Heart
October 18 ..... Congenital Heart Disease
October 25 ..... The Heart and Athletics

TELEVISION

WOI-TV—Ames, Iowa
Thursday at 9:30 p.m.
"MEDICAL DIARY"

October 6 ..... Automobile Accidents
October 13 ..... The Senior Medical Student
October 20 ..... Needy Patients—Part I
October 27 ..... Needy Patients—Part II

KGLO-TV—Mason City, Iowa
Sunday at 5:00 p.m.
"YOUR HEALTH"

October 2 ..... Ear, Nose and Throat
October 9 ..... Emotional Problems
October 16 ..... Overweight and Underweight
October 23 ..... Heart Disease

"MEDICAL DIARY"

October 30 ..... Poliomyelitis

KCRG-TV—Cedar Rapids, Iowa
Tuesday at 6:30 p.m.
"YOUR HEALTH"

October 4 ..... Mental Health
October 11 ..... Pediatrics
October 18 ..... Ear, Nose and Throat
October 25 ..... Emotional Problems

KTIV-TV—Sioux City, Iowa
Sunday at 3:30 p.m.
"YOUR HEALTH"

October 2 ..... Varicose Veins
October 9 ..... Mental Health
October 16 ..... Pediatrics
October 23 ..... Ear, Nose and Throat
October 30 ..... Emotional Problems

CULTS

Misunderstanding of words is the treachery of language. Failure to convey an intended impression has caused a sizable part of this world's trouble. The speaker is probably as often at fault for his uncritical evaluation as is the listener for his incorrect reception.

An example of both is Medicine's use of the term *cult*. To the physician this may be a vaguely defined expression implying lack of scientific understanding. But sizable segments of the public accept the word as a mark of distinction, either on the basis of persecution or exceptional ability.

The definition in the Code of Ethics of the AMA is not difficult to understand: "A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet or principle based on the authority of its promulgator to the exclusion of demonstration and scientific experience."

Andrew Taylor Still, founder of osteopathy, cried long and loud against the practice of surgery and the use of drugs.

He said, "Adjuncts are not necessary to the osteopath. . . . If he is an up-to-date osteopath, his hand is his thermometer; his hand is his syringe. An osteopath kills diphtheria, worms, with the club of reason dipped in pure arterial blood."

He said, "We are opposed to the use of drugs as remedial agencies. We are opposed to vaccination. We are opposed to the use of serums in the treatment of disease; nature furnishes its own serums if we know how to deliver them."

He said, "Osteopathy is based on the perfection of Nature's work. When all parts of the human body are in line we have health. When they are not, the effect is disease. . . ."

Today's osteopath is embarrassed by his ancestry. He wants to practice scientific medicine but is haunted by the ghost of Andrew Taylor Still.

The AMA Committee for the Study of Relations Between Osteopathy and Medicine explained this more adequately to the House of Delegates at Atlantic City in June, On the subject of "osteopathic lesions," the report said in part: "The exact nature of these 'lesions' is not known. They are non-fatal and non-surgical, and their microscopic structure has not been studied. The results of efforts to produce them experimentally have not been satisfactory. . . .

"Manipulative therapy is used as an adjunct to and not as a substitute for accepted measures of treatment. . . . Some [osteopaths] use it frequently, some infrequently and some not at all. None consider it, *per se*, to be definitive or curative therapy in disease states. . . .

"The faint aura of cultism which clings to

50 and eight years

Treating Alcohol and Drug Addiction



RALPH CLINIC

Formerly The Ralph Sanitarium

A Department of the Benjamin Burraughs Ralph Faundatian far Medical Research

Ralph Emerson Duncan, M.D., Medical Director.

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone Victor 3624

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.
4003 11th Street Place
Telephone 3-3804
Bert Davis, Rep.
Apt. 46B, Wakanda Village
Tel. 8-5540

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

HILLCREST HOSPITAL

Operated by The Retreat Company

Des Moines 12, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
ADA DUNNER, M.D., Psychiatrist
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist
MARTIN J. KRAKAUER, Psychologist

SYDNEY L. MACMULLEN, President
HERBERT W. VETTER, Administrator

2801 Woodland Ave. **Phone 5-2121**

osteopathic teaching arises out of the past. It persists because of efforts by some members of the profession to explain the results claimed for manipulative therapy on the basis of unproven physiological concepts, a tendency to use confused and ambiguous terminology and a fairly widespread failure to apply critical evaluation to results. It does not result from the present beliefs, teachings and practices of the vast majority of faculty members of the colleges of osteopathy."

That last sentence confirms the argument. Osteopaths bravely embrace the scientific developments of the medical profession, but fear to divorce their superstitions. So they are cultists, and they were so declared by the AMA House of Delegates.

As long as the "osteopathic concept" remains a part of its teachings, this school of healing is cultist, and osteopaths alone can alter that. Medicine did not place osteopaths in that category, nor is persecution involved. As a matter of fact, Medicine has carried their reluctant weight in its advance.

It becomes entirely a matter of language and the understanding of words. Science gathers facts and fits the answer into the findings. Cults begin with an answer which they try to support with findings.

Once the public understands this and senses its impact upon health, Medicine should no longer need to concern itself with the question of osteopathic rights. The next move, if there is to be a next move, must come from the other side.

—Abbreviation of an editorial in the July, 1955, Journal of the Kansas Medical Society

COURSE ON FRACTURES FOR GP'S

The University of Minnesota announces a continuation course in Fractures for General Physicians, to be held at the Center for Continuation Study on the Minneapolis campus November 21-23. The course will include a demonstration session, and registrants will be invited to bring x-rays for consultation.

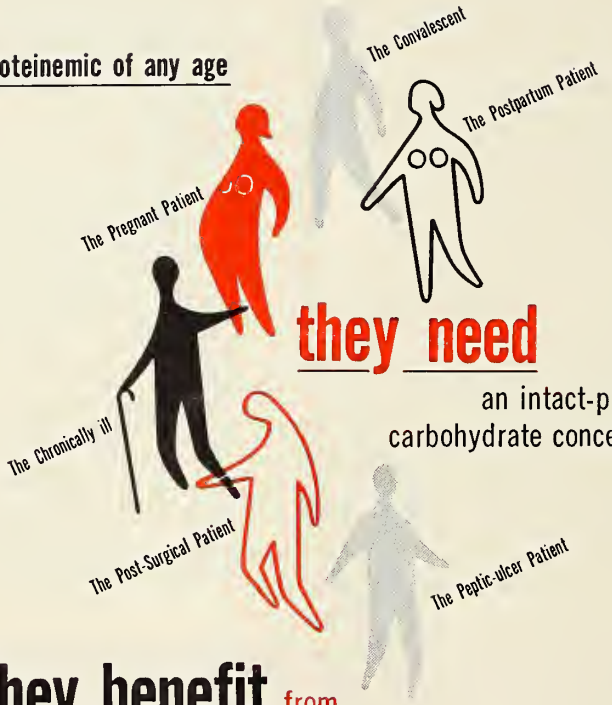
ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of September 10, 1955

Ackerman, J. H., Clarksville
(Baltimore, Maryland) Sr. Asst. Surgeon, U.S.P.H.S.
Arnold, K. E., Sioux City
(Port Hueneme, Calif.) ..... Lt. (j.g.), U.S.N.R.
Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....



The hypoproteinemic of any age



they need

an intact-protein,
carbohydrate concentrate

they benefit from

Protinal*

NATIONAL

Micropulverized casein powder (61.25%), Carbohydrate (30%)
to maintain protein/carbohydrate equilibrium essential for tissue regeneration.

COMPLETE PROTEIN

COMPLETELY PALATABLE

VIRTUALLY FAT AND SODIUM FREE (Less than 0.03% Na) (Less than 1.0% Fat)

The National Drug Company Philadelphia 44, Pa.

Available: Delicious in either vanilla or chocolate flavors, in bottles of 8 oz., 1 lb., 5 lb., and 25 lb. containers.

*VI-PROTINAL—Palatable whole protein-carbohydrate-vitamin-mineral mixture of high biological value

Berggreen, Raymond G., Mason City
(U.S. Naval Hosp., Memphis, Tenn.) ..Lt., U.S.N.R.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Bickford, R. H., Iowa City
(Lawton, Oklahoma) .....A.U.S.
Blaha, Vernon B., Marshalltown
(Great Lakes, Illinois) .....Lt. Comm., U.S.N.R.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Cline, H. L., Iowa City
(Riverside, Calif.) .....A.U.S.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
(Marine Corps Recruit Depot, San Diego,
Calif.) .....Lt.(j.g.), U.S.N.R.
Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dieckman, M. R., Grundy Center
(Great Lakes, Illinois) .....Lt. (j.g.) U.S.N.R.
Dooly, J. E., Fort Dodge
(Pleasanton, Calif.) .....Capt., U.S.A.F.
Eckberg, R. A., Hubbard
Eckhardt, R. D., Iowa City
(Portsmouth, Virginia) ..... Lt., U.S.N.R.
Ehmke, Bruce C., Iowa City
(Brooke Army Med. Ctr., Ft. Sam Houston,
Texas) .....Capt., A.U.S.
Farrior, Richard T., Iowa City
(Tampa, Florida) .....
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Geist, James H., Iowa City .....
Giles, Francis E., Cresco
(Fort Bragg, North Carolina) .....A.U.S.
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Gottsch, Joseph C., Shenandoah
(Bolling AFB Hospital, Washington, D. C.)
.....Capt., U.S.A.F.
Hach, Felix, Ankeny
(Ft. Sam Houston, Texas) .....Capt., A.U.S.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hodges, R. E., Iowa City
(Silver Spring, Maryland) .....Capt., A.U.S.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City
Grosse Isle, Michigan) .....N.A.S.
Iwen, G. W., Iowa City
(Wabeno, Wisc.) .....
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Keil. P. G., Des Moines
(Maxwell AFB. Alabama) .....Lt. Col., U.S.A.F.
Knouf, Clare E.. Lake City
(519 SW 3rd Ave., Portland, Oregon)
.....Lt. Commander, U S.N.R.
Koptik. George Jr.. Garwin.....
Kruse. R. H.. Conrad
(Pearl Harbor. T. H.) .....Lt., U.S.N.R.
Kuehnle. G. R.. Dubuque
(Baton Rouge, La.) .....
Kurth. R. J.. Waterloo
(Minneapolis, Minn.) ....Capt.. U.S.A.F

THIS DR

is the **symbol**
of the
Standardized
Tablets
Quinidine Sulfate
Natural
0.2 Gram
(approx. 3 grains)
produced by
Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.
Boston 18, Mass.

Q4

It's well past midnight. Again.
And still her night keeps
ticking away: no sleep . . . no
rest . . . no sleep . . . no rest.
If she were your patient, you'd
relieve her insomnia with–

short-acting **NEMBUTAL®**

A dose of only ¾ to 1-gr.
is enough to erase anxiety,
worries, tension. And to induce
drowsiness, followed by
refreshing sleep. With short-
acting NEMBUTAL, there is
little drug to be inactivated,
short duration of effect, wide
margin of safety and little
tendency toward morning-after
hangover. Which is why:
in equal doses, no other
barbiturate combines quicker,
briefer, more profound effect.

Abbott



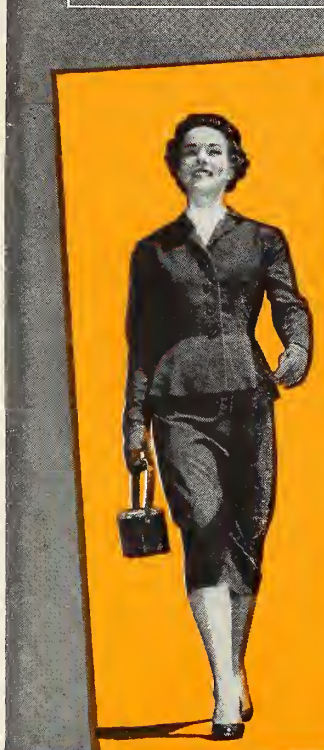
® (PENTOBARBITAL, ABBOTT)

506126

Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Lyman, Frank L., Jr., Fort Madison
(U.S. Naval Hosp., Beaufort, S. C.) ....Lt., U.S.N.R.
McCoy, John T., Cedar Falls
(U.S. Naval Hosp., Philadelphia, Penn.) Lt., U.S.N.R.
McFadden, F. Ross, Davenport
(Corpus Christi, Texas) ....Lt. Commander, U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Martins, J. K., Waterloo
(Bayonne, N. J.) ..... Lt., U.S.N.R.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Olson, Stewart O., Des Moines (Great Lakes Naval Training Station) .....
Peterson, L. G., Holstein
(Camp Kilmer, N. J.) .....A.U.S.
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powell, R. M., Iowa City
(USA Hospital, Ft. Hood, Texas) .....Capt., A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Province, Wm., Jr., Dubuque
(Long Beach, Calif.) .....U.S.N.R.
Rodgers, G. H., Mt. Ayr
(Brooke Army Hosp., Ft. Sam Houston, Texas)
.....Lt. A.U.S.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Bethesda, Maryland) .....Lt., U.S.N.R.
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Shaffer, F. J., Iowa City.....Col., U.S.A.F.
Sinton, D. W., Iowa City
(Denver, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.
Sugioka, Kenneth, Iowa City
(Long Island, N. Y.) ..... A.U.S.
Swanson, Eric M., Iowa City
(Omaha, Nebraska) .....
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(11th Field Hosp., APO 178, New York City)
.....Capt., A.U.S.
von Lackum, L. S., Oelwein
(Great Lakes, Ill.) .....Lt., U.S.N.R.
Voorhees, P. H., Ottumwa
(Jamaica, N. Y.) .....U.S.N.R.
Wilson, Robert G., Missouri Valley
(Etain A.F.B., France) .....1st Lt., U.S.A.F.
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven (Deep Sea Divers, Naval Gun Factory, Washington, D.C.) .....Lt., U.S.N.
Zeilenga, R. H., Orange City
(Madison, Wisc.) .....1st. Lt., U.S.A.F.



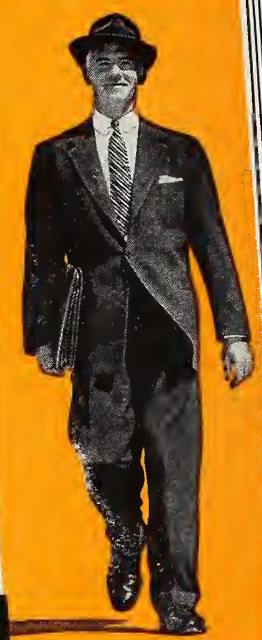
KNOX Protein Previews



How to Reduce and STAY REDUCED

with the
NEW *easy to follow*
CHOICE-OF-FOODS DIET LIST CHART
DEVELOPED BY
FOOD EDUCATION DEPT.

CHAS. B. KNOX GELATINE COMPANY
JOHNSTOWN, N. Y.



New Booklet Available to Aid Management of Overweight Patients



The 1955 edition of the well-known Knox "Eat-and-Reduce" booklet eliminates calorie counting for your obese patients. This year's edition is based on the use of Food Exchange Lists[1] which have proved so accurate in the dietary management of diabetics. These lists have been adapted to the dietary needs of patients who must lose weight.

The first 18 pages of the new booklet present in simple terms key information on the use of Food Exchanges (referred to in the book as Choices). In the center, double gatefold pages outline color-coded diets of 1200, 1600, and 1800 calories based on the Food Exchanges. Physicians will find these diets easy to revise to meet the special needs of individual patients.

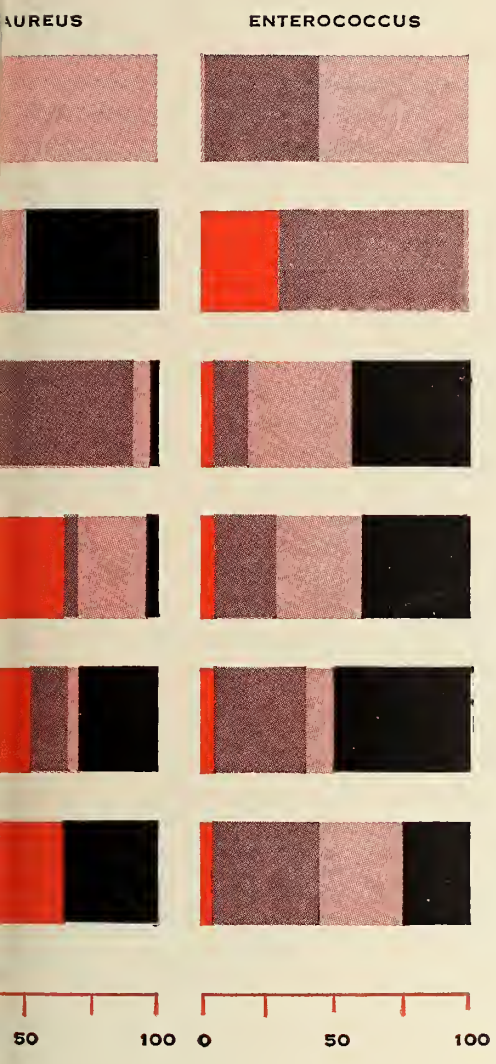
To help patients persevere in their reducing plans, the last 14 pages of the new Knox booklet are devoted to more than six dozen *tested*, low-calorie recipes. Please use the coupon below to obtain copies of the new "Eat-and-Reduce" booklet for your practice.

1. Developed by the U. S. Public Health Service assisted by committees of The American Diabetes Assn., Inc. and The American Dietetic Assn.

Chas. B. Knox Gelatine Co., Inc.
Professional Service Dept. SJ-10
Johnstown, N. Y.

Please send me____copies of the new illustrated Knox "Eat-and-Reduce" booklet based on Food Exchanges.

less resistance encountered...



Adapted from Kass, E. H.

Chloromycetin®

for today's problem pathogens

Recent in vitro tests and clinical studies again demonstrate the unsurpassed efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) against a wide variety of pathogens. For example, against urinary infections, now characterized by increased incidence of resistant gram-positive and gram-negative strains, CHLOROMYCETIN continues to provide outstanding antibacterial action.[1-11]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References (1) Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* **157**:305, 1955. (2) Kutscher, A. H.; Seguin, L.; Lewis, S.; Piro, J. D.; Zegarelli, E. V.; Rankow, R., & Segall, R.: *Antibiotics & Chemother.* 4:1023, 1954. (3) Clapper, W. E.; Wood, D. C., & Burdette, R. I.: *Antibiotics & Chemother.* 4:978, 1954. (4) Sanford, J. P.; Favour, C. B.; Harrison, J. H., & Mao, F. H.: *New England J. Med.* **251**:810, 1954. (5) Balch, H. H.: *Mil. Surgeon* **115**:419, 1954. (6) Sanford, J. P.; Favour, C. B., & Mao, F. H.: *J. Lab. & Clin. Med.* **45**:540, 1955. (7) Felshin, G.: *J. Am. M. Women's A.* **10**:51, 1955. (8) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* 5:365, 1955. (9) Kass, E. H.: *Am. J. Med.* **18**:764, 1955. (10) Stein, M. H., & Gechman, E.: *New England J. Med.* **252**:906, 1955. (11) Yow, E. M.: *Postgrad. Med.* 17:413, 1955.

MEDICAMENTA VERA

PARKE, DAVIS & COMPANY DETROIT, MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV NOVEMBER, 1955 No. 11

CONTENTS

The Management of Pre-Eclampsia and Eclampsia
Roy E. Nicodemus, M.D., Danville, Pennsylvania 553
Hematuria: Its Clinical Significance
Charles C. Higgins, M.D., Cleveland, Ohio 557
Recent Advances in Diabetes Mellitus
Richard V. McKay, Jr., M.D., Dubuque . . 560
Some Problems in the Treatment of Hepatitis
Forrest H. Coulson, M.D., Burlington . . 564
The Role of the Vitreous Humor in Various Eye Diseases
Edward E. Anderson, M.D., Davenport . 567
State University of Iowa College of Medicine
Clinical Pathologic Conference 570

EDITORIALS

You Can Help! 577
Maybe It's Not Too Bad 577
Care for the Aged 578
The Physician as Efficiency Expert . . . 579
Physician Placement Service 579

SPECIAL DEPARTMENTS

Coming Meetings 576
President's Page 581
The Journal Book Shelf 582
Blue Cross-Blue Shield 584
Your Blue Shield President Reports . . . 585
Iowa Academy of General Practice . . . 588
Mental Illness 589
State Department of Health 590
The Doctor's Business 592
Woman's Auxiliary News 593
County Societies 596
The Month in Washington xxii
Personals xxx
Deaths xl
Speakers' Bureau Schedules xliii
Roster of Iowa Physicians in Military Service xlviii

MISCELLANEOUS

Physicians Don't Leave Huge Estates . . . 566
GP Prints a Sketch of Dr. Sproul . . . 569
Institutes on Care of Prematures 575
Medical Schools Face Problem 580
Wisconsin Radiologists Congratulate ISMS . 580
Gastroenterology for GP's 588
Endocrinology for GP's 589
Civil Defense Conference 596
S.U.I. Hematology Course Cancelled . . . xxv
Pediatrics Series to Be Televised xxvi
Medical Technologists' Course xxvi
Home Care for T-B Patients xxviii
Decrease in T-B Hospitalization xxviii
AMA Booklet on Industrial Medicine . . . xl
Cardiovascular and Pulmonary Diseases . . xliv
Revised List of AMA Films xliv
Pediatrics, Obstetrics and Gynecology . . xliv
Deaths Still Decreasing xliv
Rays of Hope in Mental Health xlvi
MD's Are Family Men Par Excellence . . . xlvi

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
EDWARD W. HAMILTON, Ph.D., Asst. Editor..Des Moines

EDITORIAL BOARD

JOHN S. GREENLEAF, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

FRED STERNAGEL, M.D.....West Des Moines
GEORGE H. SCANLON, M.D.....Iowa City
ERNEST M. KERSTEN, M.D.....Fort Dodge
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication Office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



The Management of

Pre-Eclampsia and Eclampsia

ROY E. NICODEMUS, M.D.

DANVILLE, PENNSYLVANIA

ANY DISCUSSION OF THE management of pre-eclampsia and eclampsia would be incomplete without a preface concerning the prophylaxis of these serious obstetric complications. I speak of them singly, for though eclampsia is an advanced stage of pre-eclampsia, it is characterized by convulsions.

The prevention of the so-called late toxemias of pregnancy is one of the most important tasks of every obstetrician, and since the etiology of these diseases is unknown, his greatest bulwark is adequate prenatal care. It is only by frequent observation and examination of his pregnant patient from virtually the beginning of her gestation period that he can provide himself a set of norms against which to compare the possibly significant gains in weight or changes in blood pressure or urine which she experiences during her last trimester.

An adequate prenatal schedule, one that should be insisted upon for every normal, healthy pregnant woman, includes an office visit and a careful examination every four weeks during the first 24 weeks, then every three weeks from the twenty-fourth to the thirtieth week, and finally every two weeks from the thirtieth to the time of delivery, with the reservation that at the earliest development of any signs of pre-eclampsia, the visits must be weekly or in some instances twice a week.

I shall not attempt to enumerate step by step what constitutes good prenatal care, for that is elementary. The important things are that the physician should examine the patient regularly and often, and that he should record his findings accurately so that he can make comparisons with previous notes as a means of determining the significance of what appear to be abnormalities.

When I have failed, I have done so because I did not heed early warnings, but have assumed that a gradually rising blood pressure was due to my patient's stress and strain at home, or that her abnormal weight gain was probably due to dietary indiscretions, rather than to retention of fluids. I am not one who believes that pre-eclampsia develops suddenly or overnight. If it seems to do so, it is because we have failed in our observations and interpretations. Therefore, we should accept no excuses from our patients in regard to the prenatal management that we have prescribed, nor, as attending obstetricians, should we offer any ourselves in case we permit a pathology to become well advanced before we recognize it.

What is pre-eclampsia? So far as its etiology is concerned, it remains a mystery. But we can recognize it from the appearance in a pregnant woman of a syndrome consisting of hypertension, albuminuria and edema. It is a disease chiefly of the last trimester, for it rarely occurs before the twenty-fourth week of gestation. Pre-eclampsia is the beginning or incipient stage, and if it is not actively treated and checked, the convulsions and coma of eclampsia will develop.

CLINICAL SIGNS

The earliest clue to developing pre-eclampsia usually is a rising blood pressure. The dividing line between normal and pre-eclamptic blood pressure levels has been arbitrarily set at 140 mm. systolic and 90 mm. diastolic. This, however, does not hold true for all cases, and we must use the same care in evaluating a patient whose pressure

Dr. Nicodemus is a member of the staffs in obstetrics and gynecology at the Geisinger Memorial Hospital and the Foss Clinic, in Danville.

rises sharply from a normal of 100 mm. systolic and 70 mm. diastolic to 135 mm. systolic and 85 mm. diastolic, regardless of the fact that her levels are less than those established for the borderline of pre-eclampsia.

An even more significant finding is a persistent diastolic pressure of 90 mm. or more, and some men consider that symptom pathognomonic of pre-eclampsia in a patient whose blood pressure remained normal until her last trimester of pregnancy. In the more severe types of pre-eclampsia, the pressure may be elevated to 180/110, and such a reading is indicative of impending eclampsia. When the systolic pressure exceeds 200 mm., it is altogether likely that the patient is suffering from chronic hypertensive vascular disease, with or without superimposed pre-eclampsia, and in consequence the prognosis is additionally grave.

The next most important sign of pre-eclampsia is rapid and abnormal weight gain. In the last trimester, we may regard a gain of one pound per week as within normal limits. But if it is as much as twice that amount, pre-eclampsia is to be strongly suspected. This excessive weight gain is due almost entirely to the retention of water by the tissues. Early in the disease it will not be visible as true edema, such as pitting of the lower extremities, puffiness of the face and swollen eyelids. It is only when the pre-eclampsia is advanced that the true picture of waterlogging becomes apparent.

The third cardinal sign of pre-eclampsia, albuminuria, is the least constant, and especially in the milder form of the disease, may vary from day to day in a particular patient. This sign is most significant when it is present only as a trace, or as one plus, for it is usually the last of the three to develop and indicates a farther advance of the disease than had been suspected.

I think it is important to point out that these three early signs of pre-eclampsia—hypertension, excessive weight gain and albuminuria—usually occur without the patient's realizing that anything is wrong. Indeed, she is likely to insist that she feels quite well in all respects.

THERAPY FOR PRE-ECLAMPSIA

To insure the earnest cooperation of the patient, the doctor certainly should tell her of her impending danger and of what she must expect. He should tell her that from that time onward, all her food must be cooked and eaten without salt, he should give her a list of salt-containing foods that she is to avoid, and he should warn her against taking baking soda for the relief of heartburn.

In addition, it is wise for him to prescribe magnesium sulfate in the dose of a rounded tablespoonful in a little water before breakfast every other morning. It seems to be an excellent means of ridding the body of excess water. Finally, the patient must agree to return for weekly prenatal visits until she returns to normal.

It is discouraging that in spite of treatment and close surveillance, a fairly large share of early pre-eclampsias fail to improve. If, on subsequent visits, the second and/or third cardinal sign can be detected, there must be no delay in hospitalizing the patient and carrying out a systematic study to evaluate the extent of her disease. This important appraisal should include taking a history, making a general physical examination, and leaving standing orders for blood pressure readings every six hours, daily weight records, daily fluid intake and output records, daily urine examinations (quantitative for albumin and microscopic for casts), eye ground examination on admission and every second or third day thereafter, depending on the severity of the findings, and blood chemical determinations. To be helpful, these last should include uric acid, non-protein nitrogen and, in severe cases, carbon dioxide content readings.

Most obstetricians believe that ambulatory treatment of pre-eclampsia patients is entirely wrong, and that complete bed rest is essential. The diet must be salt-poor, and no salt may be added in cooking or seasoning. Ample proteins should be included in the diet, particularly eggs, lean meat and milk (a quart each day). Patients must have an average fluid intake, ordinarily 2,500 cc. daily, and up to 3,000 cc. in humid weather. To allay any nervous tension that may be present, it is helpful to prescribe a mild sedative such as phenobarbital, one-half grain two or three times a day. In addition, oral administration of magnesium sulfate, as previously mentioned, in the amount of 15 Gm. every second day will help rid the body of excess fluids.

When clinical edema is present, it may be advisable to give ammonium chloride, but one must administer it with full knowledge of its acidotic action, he should not give it on more than three or four consecutive days, and he should intersperse rest periods of three or four days each between the series of treatments. A suitable dose is 1 Gm. four times a day, and the tablet or capsule must be enteric coated.

It may require several days of this type of conservative management in the hospital before any significant improvement is noted. Most of the mild cases are usually close enough to term so that they can be continued on this regime until labor begins spontaneously or until the cervix is ripe enough for induction of labor. It is extremely uncommon for all signs and symptoms of pre-eclampsia to disappear until after the patient has been delivered. If they should disappear before delivery, it is usually because the fetus has died *in utero*. In such a case, the patient shows spectacular improvement within 24 hours.

If, after a period of four or five days, there is no improvement or actually is deterioration under

a conservative regime, then further management must be tailored to fit the individual patient. The factors that must be taken into account include such things as the condition of the cervix, the number of weeks of gestation, the prevention of convulsions, the prevention of residual hypertension and the type of delivery that is most suitable for the mother and the baby.

If the pre-eclampsia has progressed to a severe or fulminating type, with generalized edema, blood pressure higher than 160/110, heavy albuminuria and headache, one can be sure that eclampsia is imminent, and heroic measures must be instituted immediately in order to prevent convulsions. It is imperative that the patient be sedated rapidly and be kept that way for as long as is necessary. A good drug is Demerol, 100 mg. intramuscularly every two or three hours. Morphine in a dose of ¼ grain is equally beneficial, but is more likely to cause nausea and vomiting, and any such stimulus is likely to precipitate a convulsion. As soon as possible after the sedative has been given, 10 Gm. of a 50 per cent magnesium sulfate solution should be injected intramuscularly in the gluteal region as an initial dose, followed by 5 Gm. every six hours. This drug is most desirable, for it is a well known vasodilator, a particularly effective synergistic agent and a central nervous system depressant.

A retention catheter is inserted and is kept in place so that the total daily urinary output can be measured and recorded. If there should be a definite oliguria (i.e., less than 400 cc. of urine secreted in a 12 hour period), steps should be taken to encourage diuresis through the administration of 20 per cent glucose solution in distilled water in the amount of 200 cc., repeated after six hours if necessary.

In the management of severe pre-eclampsia in which the blood pressure is 160/100 or greater, we have found that the viratrum viride preparations have given best results in lowering blood pressure. Veratrone is one of the active principles of viratrum viride. It has been most efficient when administered slowly as an intravenous drip consisting of 10 minims of the drug and 1,000 cc. of 5 per cent glucose in distilled water. By means of frequent blood-pressure readings, one can regulate the drip so as to keep the pressure fairly stable at 140/90, and one can continue it for many hours with relatively few side effects.

The one real cure for pre-eclampsia is the termination of pregnancy. By taking that step, we have the best chance of preventing convulsions and residual hypertension. Unfortunately, however, there are other factors that deserve serious consideration. The baby may be so premature that its survival would be unlikely if pregnancy were terminated. The patient may have no living children and be willing to take serious risk to gratify her desire for a child. Or her religious convictions may preclude her consenting to the termination of her pregnancy.

In the milder forms of pre-eclampsia, these conservative policies certainly are justifiable at least until the thirty-fifth or thirty-sixth week of gestation, but in the severe form it is the belief of an increasing number of physicians that after the thirtieth week a baby in the lower weight brackets has a better chance of survival outside rather than inside the uterus. For next to severe essential hypertensive disease, pre-eclampsia is the commonest cause of death for the fetus *in utero*.

The method of terminating the pregnancy poses still another problem. The most important factor is the condition of the cervix. If it is soft, partially effaced and dilated 3 or 4 cm., the induction of labor by artificial rupture of the membranes is relatively simple. On the other hand, if the cervix is uneffaced, firm and closed, there is but one choice—cesarean section. Let me say that this method of termination should not be looked upon askance or thought of as no more than a last resort, as it once was. With our improved operative technics, anesthetics and antibiotics, the indications for cesarean section have been considerably liberalized, and justifiably so.

THERAPY FOR ECLAMPSIA

Up to this point, the recommended management and treatment has dealt entirely with pre-eclampsia. But we must face the fact that despite diligent and well-planned prophylactic therapy, eclampsia is not wholly preventable, and a few cases will go into the convulsive stage. The categories into which cases of eclampsia have been divided—antepartum, intrapartum and postpartum—have to do only with the times when the convulsions occur, in relation to delivery. They have little significance, if any at all, so far as the prognosis for the mother is concerned. Yet there should be higher fetal salvage in postpartum eclampsias, in which the convulsions occur after delivery, and in those of the intrapartum type, in which labor is fairly well advanced and delivery can be carried out promptly.

The treatment for the mother is essentially the same as that which I have outlined for severe pre-eclampsia, but we should take the precaution of placing the patient in a quiet, darkened room, and of providing her with constant nursing care. Some well-padded object must be within easy reach for insertion between the patient's jaws at the beginning of a convulsion to prevent injury to her tongue. Because of the danger of aspiration, the patient under no circumstances should receive any fluids by mouth until she has regained complete consciousness. The active therapy should include sedation through adequate doses of Demerol or morphine, and convulsion prevention by means of intramuscular injections of 50 per cent magnesium sulfate in the dosage that I have previously stated. To promote vasodilatation, the

Veratrone drip should be kept running for long periods, if necessary, and should be regulated to lower the blood pressure to as near 140/90 mm. as is possible. It provides the patient with the daily 2,000 to 3,000 cc. of fluid that she needs but is unable to take by mouth, and at the same time, it encourages the desired diuresis.

In some cases of eclampsia there is an associated cyanosis, and in certain instances there is evidence of pulmonary edema. Because these symptoms are most often due to some weakness of the myocardium, rapid digitalization is indicated. An equally important measure for combating cyanosis and pulmonary edema, and one which has given striking results in our hands, is the administration of oxygen continuously by means of a nasal catheter or a tent. I am afraid that up to now, too little emphasis has been placed on this measure, despite the fact that it is one of the first things that most physicians do in the numerous other conditions associated with anoxia. Oxygen therapy will markedly reduce restlessness, delirium, cyanosis and dyspnea in these patients, and thereby will shorten their periods of coma and accelerate their regaining consciousness and an ability to cooperate.

When an undelivered patient has been out of coma and has had no convulsions for a period of 24 hours, it can be assumed that the acute stage has passed, at least temporarily, and steps must be taken to deliver her during that improved state. If the cervix is unfavorable for vaginal delivery, a cesarean section is the procedure of choice. But if the cervix is "ripe," soft and dilatable, the best course that one can follow is to rupture the membranes for the induction of labor, taking the precaution of continuing ample sedation throughout labor to allay the stimuli that might bring about a resumption of convulsions.

Whatever method of delivery is selected, inhalation anesthesia is to be avoided. Conduction anesthesia and local infiltration are far superior in safety and are the anesthetics of choice in eclampsia.

CONCLUSION

In conclusion, it is only fair for me to state that other well-planned methods of dealing with the late toxemias of pregnancy exist, and they may produce equally satisfactory results. But it has been my purpose to enumerate step by step the management and treatment that we think has been most beneficial to such patients in our clinic up to the present time.

Physicians Don't Leave Huge Estates

Patients who subscribe to the belief that all physicians are inevitably wealthy because a small percentage of them prefer to drive expensive automobiles, and physicians who subscribe to the belief that driving such an automobile automatically stamps them as being a professional and financial success, will derive small comfort and support from a study of 144 obituaries of physicians and probate court cases involving their estates, made by Hartford County Medical Society, Hartford, Connecticut. Later, a report of this study was abstracted and published in the New England Mutual Life Insurance Company's official bulletin, the PILOT'S LOG.

The study revealed some startling facts:

One out of eight of the physicians, who died between 1940 and 1953, was in debt when he died.

Of the 144 physicians whose estates were studied, one out of three left net assets of less than $10,000.

Only one physician among the 144 studied was extremely wealthy, and $575,915 of his estate was consumed by estate taxes and other settlement expenses.

Only one physician in eight survived his wife.

Physicians aged 40 to 50 in the group had a death rate twice that of the general population, and in the 60-70 year bracket, the physicians' death rate was 50 per cent higher than the insurance table.

Heart disease and cerebral hemorrhage were the chief causes of death.

Expenses of estate settlements studied ranged from a minimum of 13 per cent to a maximum approximating 35 per cent.

Two most vulnerable age brackets are 40-50 and 60-70.

One out of three physicians left no will.

Commented the HARTFORD TIMES: "Doctors frequently envied for their incomes during the productive years just don't leave the huge estates many think they do."

How's your golf score, doctor?

—NORTHWEST MEDICINE, 54:1124, (Oct. 1955).

Hematuria

Its Clinical Significance

CHARLES C. HIGGINS, M.D.

CLEVELAND, OHIO

BLOOD IN THE URINE is one of the more frequent symptoms of disease of the genitourinary tract. Since hematuria is a symptom rather than a clinical entity, its presence frequently necessitates medical study as well as a complete urologic survey if one is to ascertain the underlying, causative factor.

It is well recognized that practically every disease of the urinary tract may at some time be responsible for the presence of blood in the urine. The degree of bleeding is not necessarily an index of the severity of the disease. Hematuria associated with inflammatory lesions of the urinary tract may be accompanied by dysuria, frequency and nocturia, and even though the lesions are malignant or potentially malignant, pain or discomfort may be entirely lacking. The bleeding may be profuse, but rarely is it of sufficient intensity to cause exsanguination. Indeed it may occur only to a minimal degree, being noted only on microscopic study of the urinary sediment. Lastly, bleeding may be either continuous or intermittent. When it is spasmodic and the hematuria subsides spontaneously, a false sense of security is engendered. The patient minimizes the gravity of his condition and fails to seek medical advice and counsel. To the physician, however, the cessation of bleeding does not constitute grounds for minimizing its significance, and procrastination must never be countenanced. Rather, an immediate urologic investigation is then mandatory.

From a review of statistics, it is evident that urologic investigation all too often is postponed. In a review of 933 cases of hematuria, Kretschmer stated in 1925 that the average time that elapsed between the first appearance of blood in the urine and the time of diagnosis was 2.39 years. That figure is comparable with the average lapse of 2.59 years in the 1,600 consecutive cases of hematuria that I reviewed a few years ago.

CAUSES OF HEMATURIA

In Kretschmer's series, a tumor or new growth was the most frequent cause of hematuria. MacKenzie, in a review of 2,240 cases of gross hematuria, stated that in 96 per cent the causative lesion involved the genitourinary tract, and that in more than 40 per cent the lesion was neoplastic. Rathbun perhaps has made the most impressive statement: "If we could impress upon every man practicing medicine the fact that in 50 per cent of all cases, hematuria is produced by a tumor and that a large majority of these cases are malignant or potentially malignant, we would do more to reduce our cancer mortality and morbidity than can be done in any other way."

The question arises as to the significance of microscopic hematuria. Larcom and Carter reported their findings in 3,000 consecutive single voided specimens from young men applying for insurance. In that series, 2,484 specimens were negative for erythrocytes. In 60 instances, or only 2.0 per cent, the specimens contained two to three red blood cells per high-power field, but in 23, or 0.7 per cent, it was observed that there were four to five red blood cells per high-power field. They stated: "These values support our findings on the correlation of quantitative studies that the repeated excretion of more than two red blood cells per high-power field may be significant." Thus, the presence of microscopic red blood cells in repeated specimens of urine may denote the presence of a pathologic lesion as serious as one that is accompanied by gross hematuria.

CLASSIFICATION

The following grouping has been found useful in the classification of hematuria. It enumerates the important causes of hematuria observed at the Cleveland Clinic. Although all the etiologic factors instrumental in the production of red blood cells in the urine are not cited, the tabulation serves as a working outline, and indicates the intensive and comprehensive investigation which at times is required if one is to determine the source and cause of hematuria.

I. *Hematuria associated with systemic diseases and general conditions*

- A. Acute fevers
  - 1. Scarlet fever
  - 2. Rheumatic fever
  - 3. Tonsillitis
  - 4. Measles
- B. Chronic infections
  - 1. Endocarditis (renal infarction)
  - 2. Malaria

Dr. Higgins is a staff member of the Department of Urology at The Cleveland Clinic Foundation and at The Frank E. Bunts Educational Institute.

C. Blood dyscrasias
   1. Hemophilia
   2. Polycythemia vera
   3. Purpura hemorrhagica
   4. Leukemia
   5. Sickle cell anemia
D. Deficiency and dietary diseases
   1. Scurvy
   2. Liver deficiency
   3. High protein diet (?)
E. Illnesses following medication
   1. Urotropin (R)
   2. Cantharides
   3. Mandelic acid
   4. Sulfonamides
   5. Salicylates
   6. Barbiturates
F. Diseases of unknown etiology
   1. Hodgkin's disease
   2. Hypertension or arteriosclerosis with renal involvement
   3. Periarteritis nodosa
   4. Glomerulonephritis

II. *Hematuria due to intrinsic disease of the genitourinary tract*

A. Renal
   1. Calculi or crystals
   2. Nephritis
   3. Tumor (capsular, parenchymal, pelvic)
   4. Infection, acute or chronic including tuberculosis
   5. Anomalies, polycystic kidneys, pelvic kidneys, horseshoe kidneys
   6. Trauma
B. Ureteral
   1. Calculi
   2. Infection
   3. Stricture
   4. Tumor
C. Vesical
   1. Tumor
   2. Infection
   3. Calculi or foreign bodies
   4. Ulcer
   5. Trauma
D. Bladder neck
   1. Hypertrophy of prostate, tumor, infection
   2. Infection of seminal vesicles
E. Urethra
   1. Infection
   2. Tumor
   3. Stricture
   4. Trauma

III. *Hematuria associated with extra-urinary pathology*

A. Acute appendicitis
B. Diverticulitis of the colon
C. Neoplasm of the colon, rectum or pelvic structures
D. Acute and chronic salpingitis

SIGNIFICANT CLINICAL AND LABORATORY FINDINGS

A carefully elicited history is essential. In women, it is important for one to determine whether the bleeding occurs only during urination, or whether blood is detected aside from urination. If the spotting occurs independently of urination, the source of bleeding usually is the urethra or the vagina. The urethral lesions become apparent upon inspection and palpation of the urethra. A caruncle, a tumor, a meatal ulcer or a stone may be responsible.

It is important to ascertain whether the bleeding occurs throughout urination or only at its termination, and whether the bleeding is accompanied by other symptoms such as dysuria, frequency and nocturia. During an attack of acute hemorrhagic cystitis, terminal or complete hematuria may be associated with dysuria and diurnal and nocturnal frequency. When the bleeding occurs spontaneously, however, and when it is unaccompanied by other symptoms, our attention should be focused upon the possibility of a malignant or potentially malignant lesion.

In women, obviously, the specimen of urine should be secured by catheterization. In men, it is essential that one note the type of hematuria—initial, terminal or complete. If the hematuria is initial, blood is to be observed only at the beginning of urination, and during the process the urine becomes clear. If this sequence is observed, the bleeding can be presumed to originate in the anterior or prostatic urethra. If the bleeding is terminal, the urine is clear until the end of urination, at which time a few drops of blood can be detected. Lesions in the posterior urethra, rather than vesical lesions, are usually the source of terminal hematuria. In total hematuria—i.e., when urine and blood are well mixed—the bleeding is usually of renal, uretral or bladder origin. Bright red blood, with or without clots, is associated most frequently with lesions of the bladder. Dark brown blood most frequently is associated with lesions of the upper urinary tract.

A carefully elicited history may offer a clue as to the nature of the disease. If the patient's history includes pulmonary tuberculosis or calculous disease, or if one of his parents or more than one of his other close relatives has died from renal disease, one's attention should be focused upon the possibility of his having renal tuberculosis, renal calculi or polycystic renal disease.

A history of purpuric spots or prolongation of bleeding upon injury may lead one to a presumptive diagnosis of a blood dyscrasia, whereas a recent attack of sore throat followed by the voiding

of smoky urine and the development of edema suggests the possibility of nephritis. A careful rectal or pelvic examination may reveal the presence of a benign or malignant lesion that explains the source of blood in the urine. Bilateral renal masses frequently are palpable in the presence of polycystic kidneys. Enlargement of the spleen may be detected, implying that the hematuria is associated with blood dyscrasias. Unilateral renal enlargement may be observed in the presence of neoplasms. The vas may be beaded, the epididymis thickened, or a scrotal sinus may be present when a patient has tuberculosis of the epididymis. Edema may be present when a patient has nephritis. These are only a few of the positive physical findings that help one in arriving at a correct diagnosis.

It is essential that one make a complete urologic survey, including uretero-pyelograms so as to detect or to locate lesions of the genitourinary tract. Complete laboratory data, including blood studies, Addis determination, urea clearance and blood chemistry, may be required in the establishment of the diagnosis. Frequently, sins of omission are responsible for the erroneous diagnosis of so-called "essential hematuria."

SIGNIFICANCE IN AGE GROUPS

A review of the literature reveals a paucity of communications concerning the clinical significance of hematuria in children.

The common malignant tumor of the kidney in children, Wilms's tumor, infrequently is instrumental in the production of hematuria. In our series it was observed in 18 per cent. A mass palpable in the renal area usually is the first indication of the presence of the malignant growth. An unexplained elevation of temperature may be the only symptom. Tumors of the bladder and prostate are unusual in children. In male infants, an ulceration of a stenosed urethral meatus is a frequent cause of bleeding. Between the ages of one and five years, the most common causes of hematuria, in order of frequency, are cystitis, pyelonephritis and glomerulonephritis. In children between 5 and 10 years of age, the most usual etiologic factors, in order of frequency, are glomerulonephritis, cystitis and pyelonephritis.

Inflammatory lesions, with cystitis and pyelonephritis, are the most frequent causative factors from age 15 to age 30 in both sexes. Inflammatory lesions continue to predominate in men between the ages of 31 and 40 years, the second and third most frequent causes being papillomas of the bladder and renal calculi, respectively. In women of this age group (31 to 40 years), inflammatory lesions continue to predominate, followed by calculous disease and, less frequently, papilloma of the bladder.

In men between the ages of 41 and 50 years, papillomas of the bladder or carcinomas of the bladder are the principal offenders, followed by calculi and inflammatory lesions. Inflammatory lesions continue to have the major role in the production of hematuria in women of this age group, followed by calculi and neoplasms of the bladder. Neoplasms of the kidney and bladder more frequently are observed in patients who are more than 40 years of age.

Between the ages of 51 and 60, the commonest cause of bleeding in men is neoplasm of the bladder, followed by hypertrophy of the prostate gland, carcinoma of the prostate gland and cystitis. In women of this age group, the most frequent causes are neoplasms of the bladder and cystitis.

In men between the ages of 61 and 70, prostatism, benign or malignant, is the most frequent cause, then neoplasms of the bladder and inflammatory lesions, whereas in women, neoplasms of the bladder and cystitis are the most frequent etiologic factors. It is thus obvious that in the older age groups the presence of a malignant or potentially malignant lesion must be suspected as the cause of hematuria until ruled out by a cystoscopic examination.

CONCLUSIONS

1. Hematuria is a symptom and not a clinical entity.

2. Immediate investigation, including a cystoscopic survey, is mandatory, so that causative factors may be determined.

3. Cessation of bleeding and absence of other symptoms do not minimize the gravity of the condition.

4. The public must be informed of the serious aspects of hematuria and must be advised to seek immediate medical counsel when it makes its appearance.

REFERENCES

1. Higgins, C. C.: Clinical significance of hematuria. Postgrad. Med., **10**:175-182, (Sept.) 1951.

2. Higgins, C. C.: "Significance of Hematuria." In: Clinical Conference of the Chicago Medical Society. Chicago, Official Bulletin Publishing Co., 1954, pp. 38-41.

3. Kretschmer, H. L.: Hematuria; clinical study based on 933 consecutive cases. Surg. Gynec. & Obst., **40**:683-686, (May) 1925.

4. Larcom, R. C., Jr., and Carter, G. H.: Erythrocytes in the urinary sediment (Identification and normal limits). J. Lab. & Clin. Med., **33**:875-880, (July) 1948.

5. MacKenzie, D. W.: Hematuria. Canad. M.A.J., **27**:405-406, (Oct.) 1932.

6. Rathbun, N. P.: Hematuria. J. Urol., **30**:15-26, (July) 1933.

Attend the Annual Meeting of the Iowa State Medical Society, April 22-25, 1956, in Des Moines.

Recent Advances in Diabetes Mellitus

RICHARD V. McKAY, JR., M.D.

DUBUQUE

It is variously estimated that from 0.5 to 1.0 per cent of the population are known to have diabetes mellitus. It is further apparent that there are just as many whose diabetes has not been discovered. As life expectancy gradually increases, these figures, or at least the first of them, will grow, for predominantly the disease affects the older age groups.

Since the development of management by means of insulin, diabetic patients have been living much longer, and the complexion of the problem has changed. On the one hand, juvenile diabetics who become pregnant and the children whom they bear are giving us more and more concern, and on the other, the coronary, kidney and cerebral complications of degenerative vascular disease are attracting our attention. These latter are the particularly distressing and challenging aspects of diabetes today.

PRESENT NEED FOR STRICT CONTROL

We shall be unable to work altogether efficiently in this field until we know more than we do at present about the pathogenesis of arteriosclerosis in general, for in the diabetic the picture is primarily one of an acceleration of the so-called "normal" aging process. Thus, contributions to this knowledge can come from either of two directions, but we can hardly expect much in the way of advance in the treatment of diabetes unless our discoveries pertain in some way to the fundamental problem of arteriosclerosis.

It is becoming increasingly apparent that in the present state of our knowledge, the best we can hope to do for a diabetic is to attempt preventing the acceleration of his degenerative changes. To most clinicians, this means maintaining control at as near normal levels as possible, particularly in the younger patients.[1, 2]

In contrast with the practice that was general just a few years ago, a well-balanced diet is now provided to diabetics with considerable freedom. Total caloric intake is thought to be more important than the meticulous juggling of carbohydrates, proteins and fats, though there are limits. Weight reduction in the obese is regarded as most important, of course. The patient is required to consume approximately the same quantities of food at nearly the same times each day. Insulin therapy is meticulous, every attempt being made to approximate the normal physiologic state. Ideally, this means control throughout the 24-hour period, with no postprandial glycosuria and with normal blood sugars two hours after meals and before breakfast. On the other hand, hypoglycemia is undesirable and even dangerous in the elderly. In fact, it is often surprising to find how greatly insulin dosage can be reduced after apparently good regulation has been established.

As is so often true, the problems relating to diabetes have in some ways become simpler as knowledge has been accumulated, or at least they have become better defined, and old and confusing concepts have disappeared. Yet, other and more fundamental questions have arisen.

The non-utilization theory of diabetes—that the diabetic cannot properly utilize glucose—has been replaced by the more rational concept of liver dysfunction where excessive amounts of glucose are available. The liver seems unable to assimilate and retain glucose as glycogen and fat. The dextrose-nitrogen ratios, respiratory quotients and carbohydrate-protein equivalents, which once caused confusion, have been either clarified or discarded as insignificant. It is no longer thought that ketone bodies appear because of the diabetic's inability to use them; rather, it now is realized, they are the normally metabolized end products of fat utilization. In severe diabetes, the ketones are a part of the picture of acidosis. The metabolism of fat is accelerated, and as a result, ketone bodies are present in excess of the body's ability to utilize them. Thus the whole sequence of hyperglycemia, glycosuria, dehydration, electrolyte loss, ketonemia and ketonuria, and on to acidosis and coma is now capable of rational explanation.[3, 4]

THE MECHANISM OF INSULIN

Insulin, of course, is still the central theme in any discussion of diabetes, and the fundamental question attracting attention has to do with the mechanism by which that hormone acts. Generally speaking, one can say that it is a catalyst or activator, influencing the rate of glycogen formation —accelerating a process that can proceed in its absence. Yet the precise biochemical process that is involved has not been discovered.

It is thought likely that insulin performs all three of the following functions:[5, 6, 7]

1. Accelerating the transfer of glucose across cell membranes

2. Influencing hexokinase in catalyzing the first step in carbohydrate metabolism, the formation of glucose-6-phosphate

3. Affecting the efficiency of phosphorylative

reactions, especially that related to adenosine triphosphate and co-enzyme A

Insulin resistance is another perplexing problem. In diabetes mellitus, of course, there is a deficiency of insulin. In some instances the deficiency may represent beta-cell failure, in which case the insulin requirement will be relatively modest. In other cases, because the deficiency seems to be more relative and greater, considerably larger doses are required. In some instances, indeed, there is need for more than the 30-40 units that are required after total pancreatectomy. The only explanation of such a situation must be in terms of some form of insulin resistance. Either insulin is destroyed, or its action is interfered with.

Sometimes there seems to be a true immunity to insulin, and that is understandable, since insulin is a protein. Undoubtedly, too, there are hormonal types of insulin resistance. Growth hormone, for instance, is known to be diabetogenic, though its action may be primarily in the beta cells, resulting in their exhaustion.[8] Adrenal cortical hormones and ACTH are also diabetogenic, significantly increasing the insulin requirement. The liver also is a likely factor, and it is probable that a number of agents may be involved in the production of the resistance syndrome.

"LENTE" INSULIN

During the past year, there has been progress toward a solution of another aspect of the insulin problem with the development of the so-called "lente" insulin. It was discovered that in the presence of an acetate buffer, the addition of small quantities of zinc to insulin could produce two physical forms of the substance. When the pH is adjusted rapidly upward during its preparation, a soluble, rapidly absorbed insulin is formed. It has been termed "semilente." But when the pH is adjusted to the range of 4.8 to 5.7, a highly insoluble, slowly absorbed insulin results, which has been named "ultralente." The action of the former ranges up to 12 hours, and that of the latter, up to 96 hours. Any desired range of action can be developed by combining these two.

The most nearly ideal preparation, one which acts for approximately 24 hours, is obtained by combining 30 per cent semilente and 70 per cent ultralente. It is known as "lente" insulin.[9] In its action, this preparation is almost identical with NPH insulin, its chief advantage being the elimination of the foreign protein, the protamine, and the possibility of an allergic complication that the NPH insulin entails. Lente insulin, of course, is still insulin, a protein, and sensitivity reactions to it have been reported. There has not been complete agreement regarding the value of these new products. Some clinicians laud them as significant additions to our armamentarium, but others decry them as unnecessary and confusing to the practitioner.

Further, there is a distinct disadvantage in that one cannot modify lente by adding regular insulin, as he can do when he is using NPH. The acid solution of the regular drug will alter the buffer system and radically change the range of action of lente insulin.[10] Personally, I might say, I have found very little need for lente insulin.

Considerable interest has developed recently in the so-called "anti-insulin" substance glucagon. It has been known for 30 years that there is a factor present in commercial insulin which has an elevating effect upon blood sugar and which can be separated from it only with great difficulty. This factor is hyperglycemic and glycogenolytic. With labelled glucose, it has been shown that the rise in blood sugar is due, in part at least, to the release of liver glycogen.[13, 14, 15] Some men feel that glucagon opposes the effect that insulin has on glucose transfer in the extrahepatic tissues.[16]

The site of origin for glucagon has not been conclusively proved.[19] The majority opinion seems to be that it is a hormone secreted, at least principally, by the alpha cells of the pancreas.[11, 12] Goldner's group[17, 18] feels that the alpha cells do not prdouce it, since after cobalt has destroyed them, a significant hyperglycemic effect remains in the extracted insulin. Goldner and his associates suggest that there are several other likely sites of origin in the pancreas: the D cells of the islets, the ductal tissue and the paraductal insular organs. Yet, as evidence that glucagon *is* produced in the alpha cells, as well, perhaps, as in similar cells in parts of the gastrointestinal tract, DeDuve[12] points to the *decrease* in hyperglycemic effect after cobalt has destroyed the alpha cells.

DIABETIC RETINOPATHY

Diabetic retinopathy has long been a puzzling problem, but recent work has brought some order out of chaos. The work of Friedenwalt, Becker and their groups[20, 21, 22, 23] has been most interesting and stimulating. It seems likely that the retinopathy, the nephropathy and possibly the neuropathy of diabetes are closely related.[24] Diabetic retinopathy and the Kimmelsteil-Wilson syndrome in the kidneys show almost identical changes in the respective capillaries. Pathologically, these consist of many minute saccular aneurysms, with surrounding hemorrhages and exudates where the walls have been weakened. The changes in the glomerular tufts are manifestations of the same vascular disease, one that is unrelated to malignant hypertension or arteriosclerosis. Both changes are seen in diabetes of long duration. There may or may not be a relationship to episodes of acidosis.

Indeed, these may represent a metabolically

different type of diabetes.[25, 26] There is good evidence that the adrenal cortex has a role in the pathogenesis of the retinopathy-nephropathy syndrome. First, in diabetics with syndromes of decreased adrenal cortical capacity, as Addison's disease, the lesions are absent. When adrenal hormone production is increased (e.g., in Cushing's), the lesions are common. Second, modes of treatment such as adrenalectomy which decrease cortical function improve retinopathy.[27, 28] Third, a relative hypertrophy of the adrenal cortex is found in cases of retinopathy and nephropathy. Fourth, and this is most interesting, the lesions have been produced experimentally in alloxanized rabbits by the administration of cortisone and ACTH. There is further evidence of an intimate relationship between the adrenal cortical hormone and factors of the vitamin B complex, especially B-12 and pantothenate.[22, 23] Pantothenate is necessary to adrenal cortical function, perhaps in its relationship to coenzyme A. Rats deficient in pantothenate have a decreased capacity of the adrenal cortex, and it improves with the addition of this substance.

Cortisone seems to mobilize vitamin B-12 from tissues and increases the excretion of it. If B-12 and Aureomycin are omitted from the diet of alloxanized rabbits, cortisone will increase the retinal lesions. Large doses of B-12 will not protect against such difficulties. Similarly, the excretion of B-12 test doses by human diabetics with retinopathy is much greater than the excretion of them by patients who do not have that complication, a fact which suggests that the association of increased adrenal cortical activity with the retinopathy syndrome follows, perhaps, from a decreased ability to store vitamin B-12.

Further, it is suggested that disturbed metabolism of mucoids or lipoproteins may be the pathway for the interaction of diabetes, B-12 and the hormones of the adrenal cortex.[22, 29]

All of this gets quite complicated, but it points out promising avenues for investigation in the fundamental problems of diabetes and arteriosclerosis.

DIABETES IN PREGNANCY

There have been interesting developments in the problem of diabetes in pregnancy. Formerly there was no problem, for the young diabetic usually had a severe case and rarely became pregnant because of lowered fertility and/or a short life expectancy. Now, though it is well accepted that pregnancy aggravates diabetes—especially temporarily, but permanently to a lesser degree—a few pregnancies, perhaps two or three, are not contraindicated. With good care, there is very little risk to the mother, though the fetal mortality (20 to 50 per cent) is still comparatively high.[30]

Considerable attention has been paid to the pre-diabetic state in pregnancy.[31] It has been noted that mothers of babies weighing around ten pounds often develop clinical diabetes later. Also at about the fourth month of pregnancy, the period of most marked hypercorticism, some women develop glycosuria, with elevated blood sugars and abnormal glucose tolerance curves. Hoet and his group[32] feel that such women should be given insulin to insure more nearly normal growth and development of their babies than would otherwise be possible and to prevent future diabetes in the mothers themselves. They even speculate that the period of stress *in utero* may actually be one of what have been regarded as the "hereditary" predisposing factors in diabetes, if not the only one. Only time and much investigation will clarify this interesting problem.

For diagnosis of the prediabetic state, Fajans and Conn[33] have devised a modification of the glucose tolerance test with cortisone that has been very informative. Abnormal curves are found 8½ hours after the administration of 100 to 125 mg. of cortisone in a significantly large percentage of apparently normal relatives of diabetics.

USES OF FRUCTOSE

In the past few years, fructose has taken an important place in the management of ketosis, surgery, etc. in diabetics requiring intravenous therapy. It seems clear that in diabetes the phosphorylation of glucose to glucose-6-phosphate (the first step in metabolism) is impaired. In the absence or relative absence of insulin, the phosphorylation of fructose appears to proceed at its normal rate in the diabetic.[34] This, along with evidence of normal blood pyruvate and phosphorus levels, suggests a qualitative difference in the metabolic pathways of glucose and fructose.[35, 36, 37, 38, 39] In non-diabetic patients, postoperatively for example, this finding has practical application in that there is about two-thirds less loss as glycosuria after fructose than after glucose.[40] The diabetic in ketosis utilizes fructose at a normal rate without insulin,[41] and the blood ketone levels fall more rapidly than with only saline. This latter is also true with glucose, but hyperglycemia is less prolonged, glycosuria is less and the rate of utilization is faster with fructose.[42, 43] Thus there is some theoretical and practical advantage in the use of fructose.

One of the more important of the recent developments in the therapy of diabetic acidosis and coma has been the recognition of the importance of potassium as well as of the other electrolytes, insulin and water.

Holler[44] was the first to prove the clincial significance of hypokalemia in a patient with severe dyspnea due to respiratory muscle paralysis 21 hours after the start of routine treatment for

acidosis. The serum potassium was low, and there was a dramatic response to intravenous potassium chloride. Although initial potassium levels may be normal, or even high, the deficit becomes apparent as hydration occurs, and there is a clinical picture of respiratory paralysis and vascular collapse. Prompt treatment is necessary, and fortunately it is simple. Most often, a 10 per cent solution of diabasic potassium phosphate is administered orally. Intravenous 1 per cent potassium chloride in water is rarely necessary. In either case, however, there must be an adequate urinary output before one gives potassium.

PSYCHOSOMATIC COMPLICATIONS

Important advances have been made in clarifying the so-called "psychosomatic" aspect of diabetes.

Although in some cases psychiatrists can point to significant emotional trauma that have immediately preceded the onset of diabetes, the etiologic factor is debatable. Undoubtedly, emotional factors in the prediabetic may relate to the precipitation of clinical diabetes, but control of the disease is much more clearly affected by stressful situations. This is particularly true of the so-called "brittle" diabetic, in whom loss of control and even acidosis have been observed as responses to disturbing situations. Indeed, psychiatric factors may be significant in making diabetics "brittle" in the first place.[45, 46] As in so many other fields of medicine, to deny that emotional factors play a role in diabetes is sheer folly. They have to be found, faced and understood if one is to treat the patient adequately and well.

There have been numerous other areas of advance in our knowledge of the management of diabetes and its complications that are beyond the scope of this paper. The exchange system of diets has been most helpful to both patient and doctor, and is truly a laudable development. The syndrome of renal papillary necrosis[47, 48, 49] has been clarified so that it can be recognized and treated early. Diabetic neuropathies[50] remain a problem demanding better therapy than is at present available, and there are many others.

SUMMARY

In summary then, this discussion of advances in diabetes has dealt with:

1. The necessity for reasonably meticulous management of diabetics, and in particular the younger ones, at least until such time as the degenerative complications are better understood than at present
2. The mechanisms of the action of insulin
3. Insulin resistance
4. The advantages and disadvantages of the new "lente" insulin
5. The "anti-insulin" substance glucagon, the importance of which is not quite clear
6. The fascinating and fundamental work of Friedenwald and Becker on diabetic retinopathy, and its relationship to the general problem of arteriosclerosis
7. The prediabetic state as manifested during pregnancy and in the relatives of diabetics
8. On the therapeutic side, the place of fructose, and the importance of potassium deficiency in acidosis
9. The role of our old friend, the psychosomatic complication.

BIBLIOGRAPHY

1. Ricketts, H. T.: Basic principles in therapy of diabetes. Ann. Int. Med., **37**:1181-1187, (Dec.) 1952.
2. Ricketts, H. T.: Modern treatment of diabetes mellitus. J.A.M.A., **150**:959-961, (Nov. 8) 1952.
3. Soskin, Samuel, and Levine, Rachmeil: Carbohydrate Metabolism. Chicago, University of Chicago Press, 1946.
4. Duncan, Garfield G.: Diabetes Mellitus. Philadelphia, W. B. Saunders Co., 1951.
5. Stadie, W. C.: "The Action of Insulin." In: Concepts of the Causes and Treatment of Diabetes Mellitus, a Symposium. National Vitamin Foundation, Inc. pp. 52-67.
6. Haugaard, Niels, and Marsh, Julian B.: The Action of Insulin. Springfield, Illinois, Charles C Thomas, 1953. pp. 83-103.
7. Stadie, W. C.: Current concepts of action of insulin. Physiol. Rev., **34**:52-100, (Jan.) 1954.
8. Campbell, James, *et al.*: "Relationship of Growth Hormone to Diabetes." In: Experimental Diabetes, a Symposium. Springfield, Illinois, Charles C Thomas, 1954. pp. 217-241.
9. Peck, F. B., *et al.*: Present status of insulin-zinc suspensions. Diabetes, **3**:261-265, (July-Aug.) 1954.
10. Colwell, A. R.: Insulin-zinc suspensions—Ed. Diabetes, **3**:162-163, (Mar.-Apr.) 1954.
11. DeDuve, C.: Glucagon, hyperglycemic glycogenolytic factor of pancreas. Lancet, **2**:99-104, (July 18) 1953.
12. DeDuve, C.: "Glucagon, the Hyperglycaemic-Glycogenolytic Factor of the Pancreas." In: Experimental Diabetes, a Symposium. Springfield, Illinois, Charles C Thomas, 1954. pp. 23-26.
13. Kirtley. W. R., *et al.*: Effect of purified glucagon (hyperglycemic-glycogenolytic factor) on carbohydrate and corticoid metabolism in normal and diabetic subjects. Diabetes, **2**:345-349, (Sept.-Oct.) 1953.
14. Pincus, I. J., and Rutman, J. Z.: Glucagon, hyperglycemic agent in pancreatic extract; possible factor in certain types of diabetes. AMA Arch. Int. Med., **92**:666-677, (Nov.) 1953.
15. Kibler, A. F., *et al.*: Effects in man of hyperglycemic-glycogenolytic factor of pancreas, Abs. Am. J. Med., **13**:647, (Nov.) 1952.
16. Drury, D. R., *et al.*: Effect of hyperglycemic factor on metabolism of glucose by extrahepatic tissue. Diabetes, **3**:129-132, (Mar.-Apr.) 1954.
17. Volk, B. W., Lazarus, S. S., and Goldner, M. G.: Alpha cells of pancreas: morphologic and physiologic considerations, a review. AMA Arch. Int. Med., **93**:87-106, (Jan.) 1954.
18. Goldner, M. G., *et al.*: Effect of alpha cell destruction on HGF content of canine pancreas. J. Clin. Endocrinol., **14**:184-192, (Feb.) 1954.
19. Pincus, I. J.: Hyperglycemic factor of pancreas. Tr. N. York Acad. Sc., **14**:319-332, (June) 1952.
20. Friedenwald, J. S.: Diabetic retinopathy. J.A.M.A., **150**:969-971, (Nov. 8) 1952.
21. Friedenwald, J. S.: Diabetic retinopathy—Ed., Diabetes, **2**:237-240, (May-June) 1953.
22. Becker, B., *et al.*: Vitamin B-12 excretion and diabetic retinopathy. J. Clin. Nutrition, **1**:417-423, (Sept.-Oct.) 1953.
23. Becker, B., *et al.*: Adrenal cortex and B-vitamins in diabetic retinopathy. Diabetes, **3**:175-187, (May-June) 1954.
24. Marble, A.: Diabetic neuropathy—Ed. Diabetes, **3**:329-330, (July-Aug.) 1954.
25. McCullagh, E. P., and Alivisatos, J. G.: Diabetes of anterior pituitary and adrenal cortical origin. Diabetes, **3**:349-357, (Sept.-Oct.) 1954.
26. Dana, G. W.: Type of diabetes mellitus associated with diabetic retinitis. Diabetes, **3**:210-212, (May-June) 1954.
27. Wortham, J. T., and Headstream, J. W.: Adrenalectomy in human diabetes. Diabetes, **3**:367-374, (Sept.-Oct.) 1954.
28. Kinsell, L. W., *et al.*: Hypophysectomy in human diabetes. Diabetes, **3**:358-366, (Sept.-Oct.) 1954.

29. Becker, B., *et al.*: Adrenal cortex and B-vitamins in diabetic retinopathy. Diabetes, **3**:175-187, (May-June) 1954.
30. Lukens, F. D. W.: Diabetes and pregnancy—Ed. Diabetes, **3**:249-250, (May-June) 1954.
31. McCullagh, E. P.: Pre-diabetic state in parents of overweight babies—Ed. Diabetes, **2**:160-161, (Mar.-Apr.) 1953.
32. Hoet, J. P., and Lukens, F. D. W.: Carbohydrate metabolism during pregnancy. Diabetes, **3**:1-12, (Jan.-Feb.) 1954.
33. Fajans, S. S., and Conn, J. W.: Approach to prediction of diabetes mellitus by modification of glucose tolerance test with cortisone. Diabetes, **3**:296-304, (July-Aug.) 1954.
34. Metabolism of fructose in diabetic—Ed. J.A.M.A., **149**:1142, (July 19) 1952.
35. Wick, A. N., *et al.*: Metabolism of fructose by extrahepatic tissues. Diabetes, **2**:465-468, (Nov.-Dec.) 1953.
36. Smith, L. H., Jr., Ettinger, R. H., and Seligson, D.: Comparison of metabolism of fructose and glucose in hepatic disease and diabetes mellitus. J. Clin. Invest., **32**:273-282, (Apr.) 1953.
37. Craig, J. W., *et al.*: Metabolism of fructose in the liver of normal and diabetic subjects—Abs. Am. J. Med., **12**:610, (May) 1952.
38. Craig, J. W., *et al.*: Studies of fructose metabolism in insulin resistant diabetes. Am. J. Med., **14**:500, (Apr.) 1953.
39. Daughaday, W. H., and Weichselbaum, T. E.: Utilization of intravenous fructose in diabetic acidosis and in pancreatectomized human. Metabolism, **2**:459-467, (Sept.) 1953.
40. Moncrief, J. A., Coldwater, K. B., and Elman, R.: Postoperative loss of sugar in urine following intravenous infusion of fructose (levulose), AMA Arch. Surg., **67**:57-60. (July) 1953.
41. Darragh, J. H., *et al.*: Fructose in treatment of diabetic ketosis. J. Clin. Invest., **32**:1214-1221, (Dec.) 1953.
42. Rosecan, M., and Daughaday, W. H.: Comparison of insulin treatment with and without added carbohydrate in human diabetic ketosis. J. Clin. Invest., **33**:49-56, (Jan.) 1954.
43. Bertino, J., *et al.*: Comparative observations regarding utilization and excretion of infused glucose, fructose and invert sugar, respectively. J. Clin. Endocrinol., **13**:658-661, (June) 1953.
44. Holler, J. W.: Potassium deficiency occurring during treatment of diabetic acidosis. J.A.M.A., **131**:1186-1189, (Aug. 10) 1946.
45. Hinkle, L. E., Evans, F. M., and Wolf, S.: Studies in diabetes mellitus: life history of three persons with labile diabetes, and relation of significant experiences in their lives to onset and course of disease, pt. 3 and pt. 4. Psychosom. Med., **13**:160-183, 184-202, (May-June) 1951.
46. Dunbar, Flanders: Psychosomatic Diagnosis. New York, Paul B. Hoeber, 1943.
47. Silberstein, J. S.: Necrotizing renal papillitis. Ann. Int. Med., **38**:689-705, (Apr.) 1953.
48. Mandel, E. E.: Renal medullary necrosis, a review. Am. J. Med., **13**:322-327, (Sept.) 1952.
49. Aye, R. C.: Renal papillary necrosis. Diabetes, **3**:124-128, (Mar.-Apr.) 1954.
50. Goodman, J. I., *et al.*: The Diabetic Neuropathies. Springfield, Illinois, Charles C Thomas, 1953.

Some Problems in the

Treatment of Hepatitis

FOREST H. COULSON, M.D.

BURLINGTON

FOR THE PAST three or four years, infectious hepatitis has been increasingly prevalent and widespread in southeastern Iowa. Doctors, their patients and their patients' friends are becoming aware of it, and now that articles about it have appeared in the medical sections of several periodicals, nearly everyone considers it as a definite possibility whenever certain symptoms persist for some length of time. A further indication of its growing importance in our national living is to be found in the fact that certain insurance companies exclude coverage for hepatitis in their accident and health policies.

Briefly, I should like to review some of the facts regarding the disease. Apparently there are two viruses, one of which produces the infectious type of hepatitis, and the other of which causes homologous serum jaundice. Apparently these are two separate causative agents, and there is no cross immunity. The virus that causes hepatitis is particularly hardy, for neither the pasteurizing process, freezing, dessication, or any of several preservatives can kill it, and apparently it can withstand chlorine concentrations such as are ordinarily used in drinking water. It is transmitted by fecal contamination of water, food and utensils.

Pathologically, infectious hepatitis is characterized by inflammatory changes in the parenchymal cells of the liver, especially in the portal area. Inflammatory lesions have also been described in the lymph glands, in the pancreas and in the bowel. Further pathologic findings, especially petechiae and a susceptibility to bruising and bleeding are found to be secondary to the impairment of liver function. These findings follow changes in the blood-clotting mechanism and increased capiliary fragility. They are widespread throughout the body and account for many of the bizarre symptoms that bring the patient to the doctor.

SYMPTOMS

I feel that the symptoms can be divided into two groups: those that are referable to the inflammation of the liver itself, and those that are results of changes in capillary fragility and in blood-clotting mechanism secondary to the liver disease. The outstanding complaint is fatigue. The patient declares that he feels completely worn out, he tires easily after a few minutes or a few hours of work, and he may actually collapse if he is performing some heavy and protracted task apart from his normal routine. Headaches, mild fever, poor appetite, loose stools, abdominal aches and pains, gas, backache and exhaustion drive the patient to the doctor's office for relief.

Frequently this group of symptoms follows acute upper-respiratory infection, pneumonia or acute gastroenteritis. It is just as common, how-

ever, for the onset of these symptoms to be an insidious one, and for the patient to wait several weeks or even a few months before seeking medical attention. It seems that it is almost pathognomonic of hepatitis for a patient to report intolerance to raw and fatty foods and intolerance to the highball or two that previously had caused him no discomfort whatever. He may relate that he was getting along fairly well, except for increasing fatigue, headaches and mild gastrointestinal symptoms, until he had two or three drinks at a party. On the next several days, he reports, he was scarcely able to go to work. Indeed it is not uncommon for patients to report having had a series of two or three such experiences over a period of three or four months before seeking medical aid.

Symptoms referable to the blood-clotting mechanism include profuse bleeding from hemorrhoids that previously had bled very little, heavy menstrual flow for two or three months, though previously the flow had been normal, and nosebleeds and a susceptibility to bruises. I think that small hemorrhages in the muscles of the back and in the legs account for the unusual muscle pains experienced by these patients.

Occasionally, a dramatic incident brings a hepatitis patient to the doctor. A robust young man 22 years of age is a typical case of this sort, and his history is interesting. He had become extremely dizzy while at work and had collapsed. In November, 1953, he was treated for acute hepatitis and had a rapid recovery. In March, 1954, he was again treated for a recurrence that had followed his consuming large quantities of beer over a short period of time. Two months later, in May, 1954, again after drinking several beers within a few days' time, he once more collapsed at his job after an episode of extreme vertigo.

He was unable to walk, and was brought to the hospital by some of his friends. His physical examination showed signs including nystagmus, extreme vertigo on any motion of his head, with nausea and vomiting, and enlargement and tenderness of the liver. Tiny petechiae were scattered over his body. Our final diagnosis, confirmed by a neurologic consultant, was hemorrhage from the right internal auditory artery.

I had two young woman hepatitis patients whose menstrual flow became so severe that they required transfusions. Many other female patients have shown less severe anemia.

One patient with hepatitis developed rectal bleeding that prompted investigation of the lower bowel. The result was a diagnosis of a polyp at the recto-sigmoid junction. Another patient, a woman 59 years of age, had a diagnosis of cerebral thrombosis. Over a period of three or four days while she was under observation in the hospital, she developed a right hemiplegia. The thing that interested me most in her case was that this situation developed while she had hepatitis, and one of her outstanding symptoms was frequent showers of purpuric spots about the lower parts of both her legs. She said that she had bruised easily for several years, but that the susceptibility had never before been so severe. Her hemiplegia developed during one of these periods of extensive purpuric findings. Consultation at University Hospitals, Iowa City, and at the Mayo Clinic revealed no other cause for hemiplegia.

THERAPEUTIC PROBLEMS

Problem #1: Patients expect too much too quickly. Relatively few of our patients have presented the problem of severe, acute hepatitis with jaundice. Such individuals, of course, would be easy to recognize. Instead, most of them have come to us after they have felt worn out for two to four months, or after they have developed some of the complications that I have mentioned. It is apparent, then, that the doctor meets most of his patients when their disease has reached either a sub-acute or a chronic stage, and I am convinced it is for this reason that they present a difficult, prolonged therapeutic problem. They have experienced disturbing symptoms of fatigue, lassitude, weakness and mild food intolerance so long that they are insistent on getting rapid relief. Thus the burden of a quick cure is put upon the doctor. It is understandable, in this age of miracle drugs and of glamorous surgical technics, that the patient with hepatitis is discouraged when his doctor is unable to relieve his misery overnight.

Problem #2: Sub-acute and hitherto unrecognized hepatitis must be considered when one contemplates surgery for the correction of a more obvious pathology. During an operation upon a patient who has sub-acute hepatitis, there may be excessive bleeding. But even more serious is such a patient's predisposition to postoperative collapse. The state of collapse can also follow unusual physical effort, such as pushing a lawn mower or playing a long game of golf, but what happens to patients while they are on the operating table or shortly after they have ben removed from it are preeminently the physician's concern. I feel that the state of collapse is a manifestation of hepatic insufficiency.

Problem #3 involves the concurrence of gastrointestinal symptoms. I have had several patients with duodenal ulcer who also had hepatitis. X-ray studies on other patients have produced reports of prolapsed gastric mucosa, duodenitis and irritable duodenal bulb. In these patients, it is important that one should recognize the presence of hepatitis, for in the treatment of the ulcer or duodenitis, a diet high in fat is very poorly tolerated.

Problem #4 is the depression that commonly

develops in patients with hepatitis. These people have felt so tired for so long that almost all of them have this complication. They feel inadequate. The depression often accentuates the menopausal syndrome, and I think it may activate a latent manic-depressive state. Fear is very common in this group of patients—a fear of chronic illness, especially cancer. Many of them are seen in states of tension and hyperventilation, and others of them, after feeling weak and disabled for weeks or months, feel that it is imperative that they seek consultation at a large medical center.

Problem #5 is the lack of a specific treatment for hepatitis. Bed rest is as nearly specific as any treatment known at this time, but it is usually quite unavailable. It is difficult to enforce several weeks' bed rest upon the storekeeper who has no assistant, or upon the mother of four small children who cannot afford outside help in her home. It is equally difficult to insist that the farmer should go to bed for two months during either the planting or the harvesting season.

As a result, many of these people are unable to be completely inactive for the period of time that is effective in the treatment of this disease. For that reason, after four, five or six months of dragging about, they become convinced that their difficulty must be something that hasn't yet been discovered, and that it is necessary for them to seek counsel at a large institution.

But by the time they get there in many instances, the laboratory evidence of their hepatitis has subsided, there is no elevation of the icterus index, the cephalin flocculation test is 1+, or at most 2+, and the liver may not be palpable. In consequence, the doctors at the clinic are unable to detect disease, and confusion reigns supreme.

Problem #6 is the securing of the patient's entire cooperation. It is essential that we recognize the "enlightenment" about medical problems which our patients get from many sources. Reading newspapers and other periodicals and hearing accounts of their friends' and relatives' experiences have produced a certain amount of medical knowledge in all of them. For this reason I have found that, especially in hepatitis, it is important to discuss the problem of recovery with each individual in somewhat painful detail.

Though the process is time consuming, I think the effort is warranted, for by that means the patients who fear a chronic illness such as cancer, tuberculosis or some other dread disease may learn how it happens that they can feel so bad for so long a time with hepatitis. I urge them to remember Nature's ability to produce a cure if they allow her healing ability to function. By this means, the average patient is relieved of his fear of a horrible illness and is made to understand the importance of rest in the treatment of his ailment. He can understand that he must give his body enough rest for enough weeks. This rest is best accomplished in the hospital, of course, but many patients cannot spend several weeks there. They must do the next best thing, then: they must see how little they can do for several weeks.

DIET AND MEDICATION

A low-fat diet, free of most raw foods and free of spice, is easiest for these patients to tolerate. Chocolate, coffee and harsh laxatives are to be avoided, for they frequently prolong gastrointestinal symptoms. I feel that the vitamin B complex and doses of vitamin K orally are important in the treatment of hepatitis. Intravenous vitamin K preparations are needed in the patients who have hemorrhagic problems. I have used bile salt preparations with oral vitamin K therapy, and, incidentally, the patient is often relieved of gas and abdominal discomfort when this simple treatment is added. No benefit has been observed to follow the administration of vitamin C, Adrenosem or rutin.

As in treating any other prolonged illness, the physician certainly should be alert to recognize any other disorders, ones that may precede hepatitis or develop concurrently with it. A thorough neurologic, cardiovascular, gastrointestinal and uro-genital examination must be given to each patient. X-rays, blood counts and urinalyses help one to discover other insidious diseases and aid one in reassuring the victim of hepatitis that he has no other serious ailments. When he has been relieved of his worries, the patient can recover with increased rapidity.

SUMMARY

Hepatitis is a disabling illness for which there is no miraculous cure. Its course is prolonged by lack of rest, by intercurrent infections, by poor diet and by alcohol.

There are many complications secondary to the increased capillary fragility and altered blood-clotting mechanism which accompany hepatic dysfunction. Another severe symptom is the mental depression which most patients develop as weeks go by and they seem quite incapable of keeping up with their work.

There is a definite tendency for the symptoms of weakness, lassitude, muscle aches and pains, and food intolerance to be prolonged several weeks after clinical and laboratory evidence of hepatitis has disappeared. It becomes imperative for the doctor to reassure such patients that they are not hopelessly ill and that recovery is the rule.

The Role of the Vitreous Humor

In Various Eye Diseases

EDWARD E. ANDERSON, M.D.

DAVENPORT

The vitreous is a relatively inert, structureless mass, but there is no doubt that it plays an important part in ocular pathology. Likewise, certain changes that occur in the vitreous before, during and after surgery of the eye have an important part in determining whether or not the procedure is finally successful.

There has been a revival of interest in the vitreous during recent years, mainly because of improved means of studying it, particularly the slit lamp.

PHYSIOLOGY

Embryologically, the vitreous is formed from the neuroectoderm, the surface ectoderm and the mesoderm. The vitreous is divided into primary, secondary and tertiary. The primary vitreous is formed before the 13 mm. stage, and is derived from adhesions between the lens plate and the optic cup. Later, the hyaloid vessels which pass forward from the disc to the posterior surface of the lens in a cone shaped formation contribute to the establishment of the primary vitreous. The secondary vitreous is formed from the retinal ectoderm after the 13 mm. stage. The tertiary vitreous arises from the ciliary epithelium and makes up the zonular fibres.

At birth, the primary vitreous fills the retrolental space and extends backward to the disc to form Cloquet's canal. It is separated from the secondary vitreous by the so-called hyaloid membrane. At that time, Cloquet's canal traverses the vitreous from the optic disc to the posterior capsule, but when the child is about four years old, there are changes in the elasticity of the hyaloid membrane, with the result that the canal ceases to maintain its medial position. Rather, it sinks downward, so that it is in the lower part of the vitreous body.

There is some controversy about whether the hyaloid membrane that surrounds the vitreous body is actually a membrane or merely a surface condensation of a colloidal gel. The vitreous is attached to the enveloping structures of the eye at various points. The principal one of these is at the base or synthesis of the vitreous, and consists of a zone or band approximately 2 mm. in width, extending from the ora serrata forward onto the pars plana of the ciliary body. Anteriorly, there is a ring-like attachment to the posterior lens capsule about 9 mm. in diameter that is called Egger's line. Posteriorly there are an attachment at the optic disc and a smaller attachment in the region of the macula. There are also some weak adhesions between the vitreous and the retina in the equatorial region.

Some authors continue to regard the vitreous as merely a colloidal gel, but the more modern concept is that its internal structure is definitely fibrillar. The fibrils are thought to be prolongations of cells which form a network that is permeated by a viscous fluid or jelly. Some of the fibrils are collagen, and others of them are non-collagenous. The gel is made up to a great extent of hyaluronic acid.

PATHOLOGY

The pathologic changes that occur in the vitreous body have been described in detail by Schepens.[1] He divides the changes into three types: (1) persistence of embryonic remnants; (2) invasion by foreign elements; and (3) alterations of the vitreous gel.

The persistence of a portion of the hyaloid vessels would be an example of an embryonic remnant. Elements that invade the vitreous include foreign bodies, parasites and endogenous material such as blood, connective tissue, pigment, exudates and crystal formation.

Alterations of the vitreous gel can occur in four different ways: syneresis, membrane formation, development of coarse fibers and shrinkage. Syneresis is the liquefaction of the gel. It can occur in varying degrees, i.e., the vitreous may be completely liquified, or the process may be confined to certain areas. The tendency to syneresis seems to be greatest toward the center of the vitreous body and in regions in which pathologic changes have occurred in the choroid, in the retina or in the ciliary body. Membrane formation can occur in the vitreous after contusion to the eye, vitreous hemorrhage, and inflammatory processes in the posterior part of the eye. Another type of membrane formation occurs when there is a detachment of the hyaloid membrane from its apposition to the retina.

When coarse fibres appear, they usually are floating free in the vitreous and are of various sizes and shapes. But they may be attached to parts of the retina, and, in such cases, if they are taut and under tension, they are a definite factor in retinal tears and retinal detachments.

Shrinkage of the vitreous either as a whole or in part is a condition likely to produce serious visual changes. Shrinkage, along with membrane formation and taut fibers, can produce traction on the normal vitreous attachments or on abnormal vitreo-retinal adhesions. If the shrinkage causes traction on the region of the vitreous attachment at the posterior pole, there may be some edema and hemorrhage in the region of the disc. If the shrinkage causes traction in the region of the macular area, edema or other pathologic changes of the macula may occur. Shrinkage causing traction on the retina can be responsible for such conditions as photopsia, retinal tears followed by retinal detachment and vitreous hemorrhage due to traction on a localized area of the retina.

The term *vitreous opacities* therefore covers a multitude of conditions, and each case is an individual problem as regards the changes that have occurred in the vitreous or other intraocular structures to produce the opacities that have been seen with the ophthalmoscope or slit lamp.

If feasible, it is preferable to treat the underlying cause of vitreous opacities. But the disturbance in vision that they cause the patient can be minimized, in certain cases, by an accurately fitted lens. Cowen[2] has pointed out that opacities in the anterior portion of the vitreous close to the lens are much less bothersome to the patient if he is wearing the proper correction for his refractive error. However, the effect of those opacities which lie posteriorly and close to the retina is not changed, regardless of the optical condition present.

THE VITREOUS IN CATARACT SURGERY

The role of the vitreous in cataract surgery is quite interesting and of great importance. Vitreous loss during cataract surgery is certainly undesirable, and the incidence of postoperative complications is greater when it has occurred.

The loss of vitreous can occur as soon as the corneal section is made, or it can occur before, during or after the delivery of the lens. If the vitreous is entirely fluid, it is likely to present itself in the anterior chamber as soon as the corneal section is made. Normal viscid vitreous can be extruded during the lens extraction or immediately after it has been delivered. The loss of normal vitreous is usually caused by insufficient anesthesia and akinesia, by excess intra-orbital pressure, or by undue pressure put upon the eye by the lid speculum or other instruments.

A loss of vitreous during cataract extraction is quite variable in its final effect upon the eye, but most authorities agree on its being an undesirable occurrence. Kirby[3] points out that in fluid vitreous loss there are likely to be no bad effects, but that if normally formed vitreous is lost, severe complications may result. The possibilities in that latter circumstance include prolonged inflammatory reaction in the eye, intraocular infection, interference with proper wound healing, up-drawn pupil with incarceration of the iris, retinal detachment and the possibility of complete degeneration of the eye to phthisis bulbi. The steps that can be taken to prevent vitreous loss in surgery include adequate sedation, anesthesia and akinesia; the use of preplaced sutures between cornea and sclera; and the avoidance of undue pressure on the eye by the speculum or other instruments.

Even in cases of cataract surgery where there has been no vitreous loss, there is a possibility of postoperative complications due to vitreous changes. Corneal edema can occur and may go on to bullous keratitis if there is herniation of the vitreous into the anterior chamber so that it comes into contact with the posterior surface of the cornea. Reese,[4] in a discussion of this condition, has expressed the opinion that it is the anterior hyaloid membrane in contact with the corneal endothelium which causes the corneal edema. Others feel that the corneal edema may, on occasion, have a different cause. They think it can occur merely from contact between free vitreous and the cornea. Apparently the condition of the corneal endothelium determines whether or not corneal edema will result from vitreous contact. If endothelial degeneration is present or if the endothelium is traumatized during surgery and under such circumstances is allowed to come into contact with the protruding vitreous or anterior hyaloid membrane, then corneal edema is likely. Delayed reformation of the anterior chamber in association with an endothelial dystrophy of the cornea is therefore of serious significance, and corneal edema is probable in such a combination of circumstances.

Corneal edema that follows cataract surgery requires that one take steps to prevent the contact of the hyaloid membrane with the corneal endothelium. Adequate wound closure is a means by which one can avoid having a flat chamber with vitreous contacting the cornea. In cases in which the vitreous comes in contact with the cornea by protruding through the pupil, Reese[4] advocates the use of strong miotics such as D.F.P. as a means of forcing the retraction of the herniated vitreous. If this fails, a mydriatic is used, with the patient lying on his back, and it is followed by a miotic. Other measures recommended are a posterior sclerotomy, followed by injection of air into the anterior chamber, and, if that procedure is unsuccessful, the introduction of a spatula into the anterior chamber to free the adhesion of the vitreous from the cornea.

Following cataract surgery, changes in the position of the vitreous can produce a flat anterior chamber with a choroidal detachment, even though there has been no leak of aqueous through

the wound. Villaseca[5] has devised the following theory to explain this syndrome. First, the vitreous herniates into the anterior chamber with an intact hyaloid membrane, thus displacing the aqueous from the anterior chamber. Because of this forward displacement of the vitreous, traction is put upon the base of the vitreous so that a choroidal detachment can occur. To prevent this complication, Villaseca recommends the postoperative use of short-acting mydriatics, if any are used at all, and he says they should not be used upon ambulatory patients. If a vitreous hernia should occur, he recommends the use of miotics, with the patient remaining in bed so that the vitreous can return to its normal position.

Irvine[6] has described another interesting vitreous syndrome following cataract surgery, one which explains changes in the macula that occur several months following an uncomplicated cataract extraction. He traces the sequence of events as follows. Weeks or months postoperatively there is a rupture of the hyaloid membrane, so that free vitreous enters the anterior chamber. Associated with this, there is a slight irritability of the eye, with remissions and exacerbations over a period of several months. Adhesions develop between the vitreous and the inner surface of the corneal wound. In consequence of this adhesion, there are macular changes consisting of edema, hemorrhage and degeneration. Irvine theorizes that because of the adhesions, there occurs a constant tugging on the iris, the ciliary body and the main vitreous body. He believes that the macular changes are secondary to iritis, or are due to the traction on the vitreous body which in turn causes traction on the macular area.

Following a cataract extraction, the vitreous very often plays an important role in glaucoma brought about by a pupillary block. In this condition, there is no communication between the posterior and the anterior chambers, the aqueous accumulates in the posterior one, and a rise in tension occurs. This syndrome has been described in detail by Chandler and Johnson.[7] Following an intracapsular cataract extraction when the pupil is round, this condition can occur if an adhesion develops between the iris and the intact hyaloid membrane. If the adhesion is sufficiently extensive so that the iridectomy or iridotomy openings are blocked, and if the pupillary opening is also blocked, an elevation of tension results. The aqueous accumulating in the posterior chamber pushes the iris forward, and there is a shallowing of the anterior chamber. The elevation of the tension is not usually relieved by miotics, for the constricted pupil grips the herniated vitreous all the more tightly and augments the blocking of the pupillary opening.

The treatment recommended for the correction of this type of glaucoma is either the instillation of mydriatics or surgery such as the transfixing of the iris of iridectomy. Once a communication between the posterior and the anterior chambers has been established, one can expect a drop in the tension, a deepening of the anterior chamber and a more or less complete withdrawal of the vitreous from the anterior chamber. This condition can be prevented by means of a complete iridectomy at the time of cataract surgery, or by an adequately large peripheral iridectomy. Another important prophylactic measure is that of keeping the iris mobile during the postoperative period so that adhesions between the vitreous and the iris are not allowed to form.

SUMMARY

The role of the vitreous in a variety of conditions has been discussed. One usually considers the vitreous to be a rather inert substance, the main function of which is to fill the space within the globe behind the lens and to afford a transparent medium for the transmission of light to the retina. But changes in either the make up or the position of the vitreous within the eye can account for many ocular symptoms and syndromes.

BIBLIOGRAPHY

1. Schepens, C. L.: Clinical aspects of pathologic changes in vitreous body. Am. J. Ophth., 38:8-20, (July pt. II) 1954.
2. Cowan, A.: Opacities in optical media, -Ed. Am. J. Ophth., 34:1764-1765, (Dec.) 1951.
3. Kirby, D. B.: Surgery of Cataract. Philadelphia, J. B. Lippincott, 1950.
4. Reese, A. B.: Herniation of anterior hyaloid membrane following uncomplicated intracapsular cataract extraction. Am. J. Ophth., 32:933-946, (July) 1949.
5. Villaseca, A.: Late emptying of anterior chamber and choroidal detachment in cataract operations. AMA Arch. Ophth., 52:250-262, (Aug.) 1954.
6. Irvine, S. R.: Newly defined vitreous syndrome following cataract surgery. Am. J. Ophth., 36:599-619, (May) 1953.
7. Chandler, P. A., and Johnson, C. C.: Neglected cause of secondary glaucoma in eyes in which lens is absent or subluxated. AMA Arch. Ophth., 37:740-771, (June) 1947.

GP PRINTS A SKETCH OF DR. SPROUL

One of a series of sketches on the members of the AAGP Board of Directors, a full-page article on Dr. William M. Sproul, of Des Moines, appeared in the October, 1955, issue of *GP*, accompanied by a reproduction of a studio portrait.

Among other interesting details, the article reveals that Dr. Sproul is now in his twenty-ninth year of practice, his chief hobby is woodworking, he is a member of the board of directors of the Iowa Book Collectors' Club, and he is particularly interested in Civil War history. His memberships on the committees of the Polk County and Iowa medical society committees are enumerated.

The sketch concludes by saying that Dr. Sproul "wishes" to do some delving into anthropology and astronomy.

State University of Iowa College of Medicine

Clinical Pathologic Conference

April 27, 1955

SUMMARY OF CLINICAL FINDINGS

AN 80-YEAR-OLD WHITE MAN was admitted to the hospital with a chief complaint of urine retention. Fourteen years previously, a transurethral prostatic resection had been performed on him elsewhere. Following the operation, his symptoms of obstruction had been relieved until about four or five years before his admission to University Hospitals. At that time there was a noticeable decrease in the size and force of the urinary stream and some hesitancy in voiding. About two years before his admission, abnormal frequency of urination had made its appearance, the incidence of diuria being 5 or 6 and of nocturia 3 or 4. During the final six months before admission, three episodes of slight and painless initial hematuria were noted. It was not, however, accompanied by chills, fever, flank pain or passage of calculi. The patient's condition became progressively worse, and two months prior to admission he had consulted his doctor because of pain and swelling of the lower abdomen. During the month just prior to his admission, there had been dull pain in the right lumbar region, with radiation to the anterior abdomen. Weakness, anorexia and cloudy urine had been present. No pertinent facts were contained in the remainder of the medical history.

Physical examination revealed a well developed and well nourished, edentulous white male. The lungs were clear to percussion and auscultation. The pulse was regular, it could be felt in all extremities and the volume was good. The rate was 95 per minute. The blood pressure was 175/75 mm. Hg. in the right arm. The heart was easily accessible. The point of maximum impulse was in the sixth interspace at the midclavicular line. There was a harsh systolic murmur audible over the entire precordium, heard best at the apex. A2 was greater than P2. The liver was felt just beneath the right costal margin. Suprapubically, a dull, fixed, slightly tender mass was found. The examination of the genitalia showed a right inguinal hernia and atrophic testes. Rectal examination showed good sphincter tone and a firm, rubbery prostate gland, enlarged about 2+. Laboratory examinations of the blood revealed hemoglobin 12 Gm. per 100 ml.; white blood cells 10,500 per cu. mm.; blood urea nitrogen 18 mg. per 100 ml.; and creatinine 1.2 mg. per 100 ml. The urine analysis showed pH 4.5; specific gravity 1.007; albumin and sugar negative; and Meyers 2+. Microscopically, there were 30 white blood cells and 5 red blood cells per high power field. No casts were visible. Shortly after the patient's admission, a urethral catheter was passed easily into the bladder, and 400 ml. of urine was removed. The suprapubic mass was not completely relieved, however, and routine gradual decompression of the urinary bladder was instituted.

The next morning, while x-ray studies were being done, 25 ml. of 70 per cent Urokon (sodium acetrizoate) was given intravenously. Immediately afterward, the patient became apprehensive, his pulse rate rose to 120 per minute and his respiratory rate rose to 36 per minute. These symptoms were relieved within five minutes following the administration of oxygen by face mask. An hour and a quarter later he became cyanotic, dyspneic and unresponsive. Blood pressure readings and pulse rate were unobtainable. Cedilanid and aminophylline were given intravenously, but did not evoke an effective response. Nasal oxygen therapy was instituted. In spite of these measures, the patient showed no improvement. Twenty minutes later, because the pulse and blood pressure were still unobtainable, 20 mg. of Neo-Synephrine was given intravenously without any detectable response. An electrocardiogram showed complexes similar to ventricular fibrillation, even though heart sounds were not heard on auscultation. An hour and fifty minutes after the initial injection of the drug, there were no signs compatible with life, and the patient was pronounced dead.

CLINICAL DISCUSSION

Dr. Raymond G. Bunge, Urology: The case before us is that of an elderly gentleman who, 14 years before his admission here, had had a transurethral prostatic resection. You will note that for some years afterward he remained free of his urinary symptoms, but that they recurred shortly before he came here. They are rather characteristic of a regrowth of the prostatic gland. It is quite possible that insufficient tissue was removed at the original transurethral resection. There may have been extenuating circumstances such as bleeding or a very large gland. And even if "all" the tissue is removed, regrowth is still possible because there are remaining islands of adenomatous tissue. When the patient arrived here, he had the classical symptoms of the termination of a

bladder-neck obstruction: a full bladder, paradoxical incontinence, some pain in the right flank, anorexia and weakness. We recorded this as paradoxical incontinence, for whereas in true incontinence the bladder is empty, in this case it was full, despite the patient's being incontinent.

We come now to the crux of the clinical problem: what happened to him at the time when x-ray studies were made. I shall ask Dr. Seebohm to discuss that episode.

Dr. Paul M. Seebohm, Medicine: When intravenous medication is given for the first time, there is always a risk of an immediate reaction of the anaphylactoid type. The question in this particular case is whether or not the reaction was of that sort.

The characteristics of anaphylactic reaction in human subjects are essentially as follows: bronchospasm, coryza of the eyes and nose, periocular edema, uticaria and generalized itching. After those early signs, cyanosis and vascular collapse may follow. Death, if it occurs, is likely within the first 20 minutes or half hour, and many times it takes place within the first three or four minutes. Emergency medication, however, sometimes postpones it.

In the case of this man, only oxygen was given for the relief of his acute respiratory distress. Respiratory difficulty, tachycardia and apprehension were actually the only signs of an unusual reaction. There was no evidence of coryza, skin edema, itching or anything of that sort. The fact that he recovered within five minutes following the administration of oxygen alone and walked, unaided, at least 100 feet to his bed seems to contraindicate an anaphylactic type of reaction. After once starting, a fatal response of that sort would not be likely to remit just because oxygen had been administered.

Iodine preparations, which are used rather frequently in intravenous medications and are also commonly used orally as expectorants, are capable of producing various types of reactions. Some of them I think we can classify as hypertensive or allergic, and some of them, probably, as pharmacologic reactions to the drug itself. Several days or weeks after the administration of iodine, there sometimes is a bullous skin phenomenon, a type of hypersensitivity reaction which produces a serious and possibly fatal cellulitis. A hypersecretory phenomenon is likewise common. The salivary glands may enlarge, and there may be increased lacrimation and bronchorrhea. There is a question about whether hypersensitivity is really the explanation. It may be just an exaggerated pharmacologic response that we are observing. An acneform eruption also occurs after prolonged administration of iodides, and it, too, may be a pharmacologic effect of the drug, rather than a result of true hypersensitivity.

Fatalities in such cases are by no means numerous. Pendergast, in one of several reports that have been made on the subject, indicated that there were about 10 immediate deaths in some 661,000 intravenous injections of Diodrast or iodide-like material. These immediate deaths seemed to be anaphylactic.

In considering the establishment of a prophylactic routine to precede the administration of iodide preparations, one first seeks to learn what tests or other measures there are for determining whether a particular patient is allergic to such materials. There is the skin test, but it has not been very reliable. In one study it was found that 30 per cent of the patients had some type of systemic reaction even though the skin test had been negative. And of those patients whose skin tests had been positive, only 24 per cent had systemic reactions. Thus it is evident that both false positive and false negative reactions are frequent.

If from previous evidence of susceptibility there is a greater than usual possibility of a patient's having an untoward response to iodide, the safest test would be an intravenous tracer dose of 1 cc. of a 1:10 dilution of the iodide.

What should one do after the reaction occurs? I think that whenever we must deal with a bronchospastic phenomenon, the best first-aid is a sympathomimetic drug, namely epinephrine, 1:1000 in .3 or .4 cc. doses. It is the first drug to give, and it should be on hand whenever other drug preparations are given intravenously.

Getting back once more to the patient under discussion, I should be inclined to say that his reaction probably was not anaphylactic because he seemed to be in such good shape up to an hour afterward. On this matter of immediate reactions, there is a great paucity of data. When one quizzes witnesses, he usually gets two or three different accounts of the event. It is an acute emergency, things happen fast, and the physician is unable to make all of the observations that would be necessary to the improvement of his handling such situations.

Dr. Bunge: Dr. Seebohm, is there any question in your mind about the drug's having been the cause of this patient's death? Rather, couldn't a cardiovascular disturbance have been responsible?

Dr. Seebohm: My answer to both questions is an emphatic "Yes." What I have said pertains to the anaphylactic reaction itself. We were dealing with an 80-year-old man, and a mild shock from whatever source might have triggered off a chain of events that could attack his cardiovascular structure and lead to his death. The fatality, then, need not have been a direct complication of the anaphylactic reaction. Something of the same sort might have happened if he had been forced to run up a flight of stairs or if he had been traumatized in some other way. I think there is a good possibility that the timing was particularly important.

Even though an anaphylactic reaction, in most cases, is primarily respiratory, and even though the heart is secondarily affected by the hypoxia and vascular collapse, I should be unwilling to say that such a response was more than a secondary and adventitious cause of his death.

Dr. Bunge: Would your conclusion justify the use of digitalis?

Dr. Seebohm: The protocol indicates that this man suddenly went into collapse a few minutes after he had been passed by the ward physicians as essentially normal. When the physicians were at the other end of the ward, they noticed that he suddenly had turned blue. When they reached his bedside, they found him pulseless. He was given Cedilanid and aminophylline, apparently as emergency measures, and later an electrocardiogram revealed that he had ventricular fibrillation. It is not clear whether that fibrillation had existed from the time of his collapse, whether it occurred after the administration of the digitalis preparation or whether it occurred just before the cardiogram was taken. I think it would be generally agreed that if his ventricular fibrillation had been discovered in time, he should have been given either intravenous quinidine or Pronestyl, rather than digitalis. We do not seem to have an eye witness of this event available, but from reading between the lines, I suspect that the situation was quite desperate and that it was not too clear whether the patient was alive or dead when he was given the emergency medication. And since it takes time to get an electrocardiogram done, I suspect he was given these drugs in a desperate emergency effort. If he had ventricular fibrillation at the time, then digitalis was the wrong drug to use.

Dr. Bunge: The clinical diagnosis on the record indicates that the physicians treating this man believed he died of myocardial infarction, rather than from a reaction to the Urokon. Dr. Carter, will you tell us about the autopsy findings?

Dr. John R. Carter, Pathology: The autopsy findings are in some respects rather perplexing, and they do not necessarily give us full information on what happened to this individual. One of the most conspicuous findings was severe pulmonary edema involving all lobes of both lungs, and a hydrothorax of about 300 cc. on each side. The heart was enlarged and weighed 525 Gm., as contrasted with the normal of approximately 350 Gm. There was severe arteriosclerotic valve disease of both the aortic and the mitral valves. The left side of the heart was more dilated and hypertrophied than was the right. There was generalized congestion of the viscera, particularly of the liver and spleen. One of the most striking changes, present in the kidneys, liver, spleen and especially the bone marrow, was a decided increase in the number of eosinophils. May I ask whether a differential count was made prior to the time that he was given Urokon?

Dr. Bunge: No.

Dr. Carter: Then we do not know whether or not the patient had an eosinophilia prior to the administration of the Urokon. We shall come back to that question in a moment.

Hypertrophy of the smooth musculature of the bronchioles was apparent in some areas. This one might quibble about, since it was not striking, but for an 80-year-old man it seemed more obvious than it generally is in his age group. Death could have been the result of congestive heart failure secondary to extreme valvular disease. There was no thrombosis or occlusion of the coronary vascular system, and the degree of fibrosis in the myocardium was minimal.

A section of lung showed the severe pulmonary edema. There were scattered foci of eosinophils in the lungs, but there was no evidence of infection, infarction or thrombosis.

Virtually all cells in the liver sinusoids were eosinophils. The process was diffuse and was to be seen in all of the many sections of the liver that were examined. The liver also was greatly congested, a point that I mention because of the possible relationship between this case and the canine type of anaphylactoid reaction. At the time of autopsy, we could find no abnormalities of the larynx, nor any definite evidence of bronchial spasm.

A high power photograph of bone marrow exhibited numerous scattered collections of eosinophils and eosinophilic myelocytes. Otherwise, the bone marrow was unremarkable.

There was a very definite, but focal, acute and chronic pyelonephritis. Again, scattered eosinophils were more visible than one would normally expect in an infection arising from stasis of urine subsequent to hyperplasia of the prostate.

A section from the median lobe of the prostate gland showed a mass which measured approximately 2 cm. in diameter and which presumably acted as a ball valve. It was a mass of smooth muscle and connective tissue that is sometimes referred to as a leiomyoma of the prostate. The bladder was greatly hypertrophied and revealed cellules and diverticula. The ureters were moderately dilated, but no stones were found, and there was no evidence of infection.

I mentioned when I started that this case had some perplexing aspects. A pertinent question is what time is required for eosinophils to gain access to the various organs following an anaphylactoid reaction—if we assume for the moment that there was one in this case. You will remember that the eosinophils were increased in the bone marrow, liver, spleen and kidneys. The only answer that I can find—and it is not the direct one—is that in animals, when once the systemic effects have become manifest, eosinophilia has been noted in these organs within about 70 minutes. However we do not know whether the patient may have had eosinophilia prior to his receiving Urokon.

The evidence at autopsy was suggestive of no other explanation for the eosinophilia. Or, in other words, the pathologic changes were entirely consistent with, but not diagnostic of, an anaphylactoid reaction.

Dr. Robert I. Lubin, Medicine: Would you say a few words about the arteriosclerosis of the mitral valve?

Dr. Carter: The valvular lesion did not appear to be a case of old rheumatic endocarditis. The chorda tendinea and free margins were quite thin and delicate, but otherwise the leaflets were greatly thickened, and there were numerous calcium plaques scattered throughout. There was a striking increase in the amount of fibrous tissue, but there was no evidence of recent infection. The fibrosis, hyalinization and calcification were somewhat excessive, I should admit, even for an 80-year-old man. Because of the character of the free margin and because of certain other features, it was our impression that this probably was not an old rheumatic endocarditis, but since the damage was so great, one cannot completely eliminate that possibility.

SUMMARY OF NECROPSY FINDINGS

All lobes of both lungs, alveoli and bronchi, contained copious quantities of pink fluid, and approximately 300 ml. of amber fluid was present in both pleural spaces. There was no inflammation or tumor. Moderate pulmonary fibrosis, emphysema and arteriosclerosis were present, and, in areas, the peribronchial smooth musculature was hypertrophied. The heart was hypertrophied (525 Gm.) and revealed focal areas of fibrosis and fatty infiltration. There was marked sclerosis and some calcification of the mitral and aortic valves, particularly the latter. Generalized arterio- and arteriolosclerosis were conspicuous.

The kidneys were the seat of focal acute and chronic pyelonephritis. Small wedge-shaped areas of old infarction and ischemia secondary to nephrosclerosis were prominent features. The median lobe of the prostate gland was greatly enlarged, and it projected superiorly and anteriorly, effecting a ball-valve type of obstruction that resulted in hypertrophy of the bladder. Histologically, the median lobe showed leiomyomatous changes of smooth muscle and fibrous tissue hyperplasia. The lateral lobes were also enlarged and had caused elongation and narrowing of the prostatic urethra. The postmortem BUN and creatinine were within normal limits.

There was a pronounced increase of eosinophilic myelocytes in the bone marrow, and the sinusoids of the liver as well as the splenic pulp were choked with eosinophils. These findings, together with the smooth muscle hypertrophy of the bronchi, strongly suggested an allergic response.

The immediate cause of death was respiratory failure due to the severe pulmonary edema.

NECROPSY DIAGNOSES

Pulmonary edema, severe, bilateral, with fibrosis, emphysema and arteriosclerosis

Hydrothorax, bilateral

Cardiac hypertrophy, with severe arteriosclerotic mitral and aortic valvular disease and with aortic insufficiency

Generalized arterio- and arteriolosclerosis

Focal acute and chronic pyelonephritis

Hyperplasia of prostate gland, with hypertrophy of bladder

Eosinophilic hyperplasia of bone marrow, with eosinophilia of liver and spleen

Hypertrophy of peribronchial musculature

Dr. Bunge: I am a little uncertain of the distinction between *anaphylactic* and *anaphylactoid.* Dr. Seebohm, you will correct me if I am wrong, but it is my impression that *anaphylactic* describes a reaction to a protein that has previously been introduced into the body, and that *anaphylactoid* describes the more physiochemical reaction to a non-protein substance.

Dr. Seebohm: I think you are correct.

Dr. Bunge: Then according to our definition, this patient is supposed to have had an anaphylactoid reaction, though I realize that Dr. Carter does not know for certain. I think it might be pointed out that this substance, Urokon, contains an organic iodide, which perhaps may produce a reaction differing somewhat from that of iodine.

The use of intravenous urography certainly has its dangers. Routinely, we attempt to avoid them by a very close questioning of the patient regarding previous allergic reactions, and in very doubtful cases we perform an intradermal test or place a drop of the solution in the eye or underneath the tongue. I should like to ask Dr. Seebohm just how predictive these tests are.

Dr. Seebohm: I do not think they are very reliable. One can get a negative reaction to the test, and then after introducing the drug intravenously have a systemic reaction. On the other hand, if one does get a positive skin test that is beyond the normal irritative capacity of the drug, I think one ought to be on guard and proceed cautiously. If it is absolutely necessary to give the drug, the tracer technic should be used first. A negative result is not proof that one will not get a systemic reaction, and that is the case even when horse serum has been given intravenously, though the skin test is generally quite reliable in such instances. A negative skin test to horse serum does not mean that the patient will have no systemic reaction to the material when it is given intravenously.

Dr. Lubin: What do you mean by a tracer dose?

Dr. Seebohm: I mentioned earlier that one might give 1 cc. of a 1:10 dilution and get a mild type of anaphylactic response. The chances that it might be fatal are comparatively slight, but even it involves a hazard, a fact that one must keep in

mind. If one gets a good positive skin reaction and there is a good history of intolerance to the drug, I would not suggest giving a tracer dose just to make sure that the history is valid. If the study seems essential—though I doubt that it frequently is so—then a trial intravenous dose is a legitimate risk.

Student: How long does it take to get a reaction to a tracer dose?

Dr. Seebohm: It is likely to come on within a matter of minutes.

Dr. Frederic W. Stamler, Pathology: Is there any possibility of desensitization?

Dr. Seebohm: Ordinarily not. I do not know of any studies that have been done with iodides, but with other drugs, such as aspirin, which frequently produces an immediate type of reaction, it has not been possible to desensitize. In general, one ought not to try it, because of the unpredictable nature of the reaction. Even with horse serum, we probably do not actually desensitize patients. We simply give the horse serum in small amounts, producing minor shocks without killing the patient but not actually desensitizing him to it.

Dr. Bunge: It might be pointed out, too, that a lack of reaction to a previous injection of one of these drugs is no guarantee that the patient will never react. Dr. Schueler, could you enlighten us concerning the pharmacodynamics of these organic iodides?

Dr. Fred W. Schueler, Pharmacology: Strictly speaking, the so-called diagnostic agents are not a pharmacologic problem. If they enter into our departmental discussions at all, we usually consider them from the point of view of toxicology. I do not mean to be facetious; there is a widespread belief that when an agent is labelled "diagnostic drug," it suddenly loses all of the ordinary attributes of a pharmacologic agent, namely, that of being spread throughout the body and entering all cells to a greater or lesser extent.

It is in this regard that I should like to spend a moment reviewing something that Dr. Bunge brought up. These compounds contain organically bound iodine. They are not iodides—i.e., the iodine is not ionic. Iodine does not easily separate itself from the molecule, and therefore when it is given in a large dose, one has no reason, ordinarily, to look for toxic effects of the type accompanying the administration of sodium or potassium iodide. If it is used chronically over a period of time or in large doses, as in cases of tuberculosis or hypothyroidism, the small amounts of iodide which are released through its metabolism may be undesirable. I might point out that they are salts—sodium salts rather than weak acids—and therefore are rather alkaline. They are given, moreover, in very concentrated solution—anywhere from 30 to 70 per cent. Thus, because they can easily sclerose the tissues, it is a good idea to get all of the solution into the vein. Since they are highly irritant, using them interdermally is useless—a little like putting some lye solution into the skin. Also, a drop in the eye is hardly to be recommended. Actually, topical or other local applications of Hippuran, phenolphthalein, iodized phenolphthalein and Urokon (the particular agent used in this case) do not as a rule give any indication of their anaphylactic nature. Moreover, it is known specifically that these agents give rise to anaphylactoid reactions directed for the most part toward the blood vascular system, rather than toward the pulmonary system. They are contraindicated in severe liver disease and in nephritis.

A good brief review of this subject is to be found in the 1953 edition of NEW AND NON-OFFICIAL REMEDIES. There is general agreement on certain specific precautions to be exercised in their administration. First, the patient should be subjected to partial dehydration, a procedure that tends to concentrate the drug so that less is required. The gastrointestinal tract should be relatively empty during the diagnostic procedure, and the patient should be mildly sedated. Epinephrine should be kept at hand—immediately at hand! Then, since one cannot rely upon topical tests for individual sensitivity, the first 1 or 2 cc. should be given very slowly and should be followed by a waiting period of several minutes. Then the remainder should be injected very slowly, to avoid sclerosing the blood vessels. Even then, nausea, vomiting and pulmonary distress are common. One of the most dangerous complications is the formation of venous thrombi because of the caustic nature of the drug. Too rapid injection does not allow time for the blood to dilute it. These drugs have been known to produce secondary shock, and I would like to ask Dr. Seebohm whether he thinks it possible that the initial reaction in this case was an anaphylactoid-like reaction that led eventually (within an hour or an hour and a half) to a state of secondary shock. The tachyphylaxis and the general state of the patient at the beginning might suggest that even at the beginning he was starting on the road to shock.

Dr. Seebohm: I cannot answer that, Dr. Schueler. I should doubt that the shock that we see following anaphylaxis would follow such a pattern, for rather than going progressively downhill, the patient appeared to have recovered. Then, later, he suddenly developed a failure of cardiac output. Apparently his heart sounds were not audible and there was no pulse, but he was still breathing sufficiently to make people think he was still alive. I presume it was then that his ventricular fibrillation began. I wonder whether some of the effects that you have said these alkaline agents produce on the musculature are not the normal results of giving an intravenous alkaline solution. I think it should be pointed out that it is quite rare for people to have a true anaphylactic sensitivity to these substances, and that in such cases one might

expect bronchospasm. Would you go along with that, Dr. Schueler?

Dr. Schueler: Yes.

Dr. Bunge: I think the history of the use of these dyes is rather interesting. It was noted that when sodium iodide is used for retrograde pyelography, an occasional spontaneous pyelogram appears on the opposite side. A great deal of research went into the intravenous use of sodium iodide, and in 1928 Roundtree found that it required approximately 200 cc. of sodium iodide to obtain a pyelogram in dogs, a dose that was so toxic he never dared to give it to a human being. About a year later, Rosenow combined iodide with urea, a good diuretic. He was the first to obtain pyelograms in a human being. The only trouble was that to obtain a pyelogram one had to wait three hours until sufficient dye had concentrated in the kidney collecting system.

The next development was the rather interesting experiment in which Inz tried to improve the benzine ring and Neosalvarsan. When he finally decided he was unable to do that, he developed a compound using the pyridine ring and gave it to a colleague for treatment of coccal infections of the gall bladder. In several patients who were treated with this drug, nothing happened to the gall bladder, but very good shadows turned up in the renal area. Thus inadvertently, Inz was the developer of a new compound for intravenous urography. Newer compounds currently in use are Diodrast, Neoiopax, Urokon and Hypaque, all designed to give minimal reactions and good concentrations of the dye for the obtaining of pyelograms. By searching our records, I have found that in the five years that ended July 1, 1954, we did over 17,196 pyelograms, and in that time we had only one probable death—the one we are discussing today. I should estimate that between 40 and 50 per cent of our patients have had some mild reaction, but severe reactions have been in the range of 5 to 10 per cent.

Student: What would you say about the routine use of antihistaminics?

Dr. Seebohm: I should like to have Dr. Schueler give his opinion, but I shall cite an example of our experience with this problem. Several years ago, we administered Pyribenzamine and placebo to alternate patients before giving them their urograms. After tabulating all the symptoms—nausea, vomiting, flushing, etc.—we found that the people who got the Pyribenzamine had a higher incidence of flushing and nausea than did the control group. Because there were no severe anaphylactic-like reactions in either group, our test did not answer the question that you have raised, whether or not antihistaminics safeguard against reactions from intravenous administration of these contrast media.

It is my own feeling that when one is dealing with an anaphylactic reaction, the best antagonist to use is epinephrine. I should like to hear what Dr. Schueler thinks, for this question arises very frequently in day-to-day operation around the hospital. People seem to feel that antihistaminics are potent preventatives, but it has been my experience that however good such drugs may be for hay fever, epinephrine is preferable when one needs quick action in a vital matter.

Dr. Schueler: The antihistaminics are not by any means the drugs of choice in the treatment of a severe anaphylactic reaction. Epinephrine or Neo-Synephrine are still far preferable. I assume, however, that the questioner more or less implied a preference for a prophylactic that might be given routinely before the contrast medium was administered. On this, my feeling at the moment would be that the more different drugs one pours into an individual, the more likely he is to build up some sensitivity to diverse types of molecules. This patient, like nearly everyone else, probably used aspirin, which is a benzoic acid derivative. The particular diagnostic agent in this case, Urokon, is also a benzoic acid derivative. Of course it is very doubtful that there was a cross reaction here, but such a thing is always possible, and it would follow a principle that is well recognized. I believe that the use of antihistaminic drugs in any sort of routine manner—i.e., in anything beyond a real therapeutic regimen—should be frowned upon.

Institutes on Care of Prematures

Institutes on the care of premature infants, now in their seventh year, are sponsored by the New York State Department of Health and the Children's Bureau of the federal HEW Department, at New York Hospital—Cornell Medical Center. They are designed for physicians and nurses in charge of hospital premature nurseries and special premature centers, and for medical and nursing directors and consultants of state and local premature programs. Participants pay no tuition fee, and stipends are provided to help cover expenses during attendance. The institutes are of two weeks' duration for physicians and of four weeks' duration for nurses.

The remaining institutes scheduled for 1955-1956 will begin on November 21 and January 30, but if applications are sufficiently numerous, additional ones will be scheduled to start on April 2 and May 21. For additional information, one can address Box 143, Institute in the Care of Premature Infants, New York Hospital, 525 East 68th Street, New York City 21.

Coming Meetings

In State

Nov. 4-5	**Obstetrics & Gynecology.** SUI College of Medicine, Iowa City
Dec. 8	**Diabetes.** SUI College of Medicine, Iowa City

Out of State

Nov. 1-3	**International Symposium on Enzymes.** Henry Ford Hospital, Detroit
Nov. 3	**Clay County (Missouri) Annual Clinical Conference.** Excelsior Springs
Nov. 3-4	**Cardiac Roentgenology.** New York University, NYC
Nov. 5	**American College of Physicians,** Regional Meetings. Louisville
Nov. 6-13	**Second International College of Allergology.** Rio de Janeiro, Brazil
Nov. 7	**Gastroscopy—40 hour course.** Cook County Graduate School of Medicine, Chicago
Nov. 7-9	**Assn. of Military Surgeons,** annual convention. Statler Hotel, Washington, D. C.
Nov. 7-9	**Gynecology.** U. of Kansas Medical Center, Kansas City, Kansas
Nov. 7-9	**Clinical Pharmacology and Therapeutics.** U. of Colo. Med. Ctr., Denver
Nov. 7-9	**Pediatrics.** University of Texas, Dallas
Nov. 7-11	**Hematology.** New York University, NYC
Nov. 7-11	**Lead Problems in Industry.** Kettering Laboratory, University of Cincinnati
Nov. 7-11	**Vaginal Approach to Pelvic Surgery.** Cook County Grad. Sch. of Med., Chicago
Nov. 7-11	**Spacial Vectorcardiography.** Mt. Sinai Hospital, NYC
Nov. 7-11	**Arthritis and Allied Rheumatic Disorders.** New York University, NYC
Nov. 7-11	**Hematology.** New York University, NYC
Nov. 7-12	**Electrocardiography.** Mt. Sinai Hospital, Miami Beach, Florida
Nov. 7-12	**Radiology for Radiologists.** U. of Minnesota, Minneapolis
Nov. 7-18	**General & Surgical Obstetrics.** Cook County Grad. Sch. Med., Chicago
Nov. 7-18	**Endaural Surgery.** New York University, NYC
Nov. 7-18	**Cytoscopy.** Cook County Graduate School of Medicine, Chicago
Nov. 7-18	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
Nov. 8-10	**Endocrinology for General Physicians.** U. of Nebr. Coll. of Med., Omaha
Nov. 9-10	**Postgraduate Course in EENT.** Ohio State University, Columbus
Nov. 9-10	**Surgery.** Bunts Institute, 2020 E. 93rd Street, Cleveland
Nov. 9-10	**Annual Fall Postgraduate Clinic.** Sheraton Cadillac Hotel, Detroit
Nov. 10-11	**Missouri Heart Association Postgraduate Course.** Camdenton
Nov. 10-12	**Electrolyte and Fluid Balance.** U. of Colo. Med. Ctr., Denver
Nov. 10-12	**American College of Cardiology, Fourth Interim Meeting.** Hotel Claridge, Memphis
Nov. 11	**Cardiac Arrest and Resuscitation.** New York University, NYC
Nov. 11-12	**Inter-Society Cytology Council,** annual meeting. Statler Hotel, Cleveland
Nov. 12-13	**County Medical Societies Civil Defense Organization.** Sherman Hotel, Chicago
Nov. 13-14	**Postgraduate Refresher Course.** University of Toronto
Nov. 14-15	**Office Proctology.** Mt. Sinai Hospital, NYC
Nov. 14-16	**Bacteriology and Blood Bank Technics for Medical Technologists.** Continuation Study Ctr., U. of Minnesota, Minneapolis
Nov. 14-16	**Diabetes.** New York University, NYC
Nov. 14-17	**Southern Medical Association,** Annual Meeting. Houston
Nov. 14-17	**Congenital Heart Disease.** Johns Hopkins Hospital, Baltimore
Nov. 14-17	**Internal Medicine.** U. of Kansas Medical Center, Kansas City, Kansas
Nov. 14-17	**Interstate Postgraduate Medical Association,** scientific assembly. Milwaukee
Nov. 14-18	**Postgraduate Course in Chest Diseases. Am. Coll. Chest Physicians.** Hotel Park-Sheraton, New York City
Nov. 14-18	**Am. Public Health Assn.,** annual meeting. Municipal auditorium, Kansas City, Missouri
Nov. 14-18	**Cancer.** Columbia-Presbyterian Medical Center, NYC
Nov. 14-18	**Internal Medicine.** University of Washington, Seattle
Nov. 14-18	**Forensic Pathology.** Walter Reed Hospital, Washington, D. C.
Nov. 14-18	**Neuropsychiatric Aspects of Internal Medicine.** University of Wisconsin, Madison
Nov. 14-18	**Electrocardiography.** New York University, NYC
Nov. 14-18	**X-ray Diagnosis in Obstetrics & Gynecology.** New York University, NYC
Nov. 14-25	**Lab. Diagnosis of T-B for Lab. Personnel.** (Also open to senior staff members and lab. directors.) USPHS, Chamblee, Georgia
Nov. 16-18	**Refresher Course in General Practice.** Vancouver General Hospital, Vancouver, B. C.
Nov. 17-18	**X-ray in Pulmonary and Urologic Diseases.** Tulane University, New Orleans
Nov. 18	**Arterial Grafting.** Academy of Medicine of Cleveland and Cuyahoga County, 2009 Adelbert Road, Cleveland
Nov. 19-20	**North Central Conference.** St. Paul
Nov. 19-21	**Am. Assoc. Blood Banks.** Palmer House, Chicago
Nov. 21	**Medical Problem of the Problem Drinker.** Academy of Medicine of Cleveland and Cuyahoga County, 2009 Adelbert Road, Cleveland
Nov. 21-22	**Fractures for General Physicians.** U. of Minnesota, Minneapolis
Nov. 21-25	**Clinical Bronchoscopy.** Cook County Graduate School of Medicine, Chicago
Nov. 23-Dec. 4	**Postgraduate Medical Cruise.** Duke University, Durham, North Carolina
Nov. 27-28	**American College of Physicians,** Interim Session. Sheraton Plaza Hotel, Boston
Nov. 28	**National Medical Public Relations Conference.** Statler Hotel, Boston
Nov. 28-30	**National Soc. for Crippled Chn. & Adults.** Palmer House, Chicago
Nov. 28-30	**Diagnosis & Treatment of Cancer.** City of Hope, Duarte, Calif.
Nov. 28-Dec. 2	**Electrocardiography.** New England Center Hospital, Boston
Nov. 28-Dec. 2	**Peripheral Vascular Diseases.** New York University, NYC
Nov. 28-Dec. 2	**Surgery of Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 2	**Culdoscopy.** New York University, NYC
Nov. 28-Dec. 9	**Office & Operative Gynecology.** Cook County Grad. Sch. Med., Chicago
Nov. 28.-Dec. 9	**Gynecology.** Cook County Graduate School of Medicine, Chicago
Nov. 28.-Dec. 9	**Cystoscopy.** Cook County Graduate School of Medicine, Chicago
Nov. 28.-Dec. 9	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 9	**Surgery of the Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 11	**Trauma (Excluding Fractures).** New York University, NYC
Nov. 29-Dec. 2	**Interim Session, AMA.** Boston
Nov. 30-Dec. 1	**Geriatrics.** Hotel Roosevelt, NYC
Dec. 1	**Infectious Diseases.** Univ. of Buffalo School of Medicine, Buffalo

(Continued on page xxvi)



YOU CAN HELP!

The Hoover Commission's recommendations for economies in the executive branch of the federal government are in danger of being shelved! In these days of virtually confiscatory taxation, are you content to let that happen?

Carrying out the plans that the Commission has proposed would save American taxpayers more than $5 billion a year without weakening our national defense and without curtailing any service that the government is morally obligated to provide.

As regards federally provided health services, for example, the Commission advises the adoption of the following common-sense program: *

1. The appointment of an advisory council to combine, coordinate and simplify the health activities of 66 administrative agencies scattered among 26 federal departments and quasi-independent bureaus.

2. Regional coordination of military hospital services.

3. Cross-servicing among military, V-A and USPHS hospitals, so as to permit a more efficient utilization of facilities.

4. Closing of inefficient hospitals.

5. Denial of free care to merchant seamen in USPHS hospitals.

6. Cessation of construction of new federal hospitals.

To discover the area utilization of federal hospital facilities, the Commission made detailed studies in and about San Francisco, New York City and Norfolk. In the San Francisco region, it found 16 federal installations. Only 55 per cent of the beds in them were occupied. The V-A general hospitals were being used nearly to capacity, but the military ones were no more than 40 per cent filled. It found quite similar situations in the New York and Norfolk areas.

In the country as a whole, during the past five years, V-A general hospitals have been no more than 75 per cent full, on the average, and there have been no waiting lists, even for non-service-connected cases. There are 16,000 patients, all non-service-connected, waiting for admission to V-A mental hospitals, but there are 53,000 beds in those institutions now, 3,000 more will shortly be available, and as the V-A cares for more of its T-B cases on an out-patient basis, others of its hospitals, or parts of hospitals, can be adapted to the housing of neuropsychiatric cases.

At present, the Commission found, Army and Navy hospitals could care for all of the patients in Air Force hospitals, in addition to their own, without the slightest difficulty, and since the Armed Forces presumably have been unified under a single department in the President's cabinet, there is no obvious reason why they should not do so. Indeed, if the V-A facilities had been used for the care only of patients with service-connected ailments, the hospitals that the V-A had in use as early as 1933 would have had enough spare beds to accommodate all of the military patients that the Army, the Navy and the Marine Corps (together with their respective air arms) hospitalized in this country during World War II and the Korean conflict.

But according to the latest figures that are available, 84.3 per cent of the discharges during 1952 from V-A hospitals were individuals who had had non-service-connected illnesses, and during that same year, 62.4 per cent of the daily patient load at such hospitals were non-service-connected cases. In 1952, at the peak of the Korean conflict, the hospitals belonging to the Defense Department were no more than 54 per cent full; in 1953 they were 48 per cent utilized; in 1954, 44 per cent; and so far in 1955, 37 per cent. Yet, appropriations for new hospital construction totaled $11 million in 1952; $6 million in 1953; $49 million in 1954; and $62 million in 1955.

Ask your senators and your representatives whether or not they will take the lead in seeing to it that the Hoover Commission's recommendations are implemented! And make sure that their replies are given the greatest possible publicity!

* Data in the succeeding paragraphs of this editorial were taken from "Federal Medical Services: Their Impact on Taxpayers," by C. F. Andrews, M.D. Nebraska M.J. 40:364-367. (Oct.) 1955.

MAYBE IT'S NOT TOO BAD

The editors of the NEW YORK STATE JOURNAL OF MEDICINE point out that the amount of attention given to health problems and to Medicine's attempts at solving them has increased enormously during the past three decades, and they suggest that physicians are mistaken in supposing most of that attention to be unfriendly.

Mr. Dan Mich, editorial director of LOOK, recently released the results of a survey which his research department had compiled. On four medical subjects—cancer, tuberculosis, heart disease and poliomyelitis—no more than 30 articles appeared during the year 1923, and 19 of those were on tuberculosis. None of the magazines that published them had what could be described as "mass

circulation." During 1953, just 30 years later, there were 299 articles on the same four subjects, all of them in popular magazines. THE SATURDAY EVENING POST regularly prints between 20 and 30 a year; GOOD HOUSEKEEPING includes one in each of its issues.

The New York editors are inclined to think it unreasonable for doctors to show distress over finding a few onions among so many lilies. And though they plead, somewhat parenthetically, for facts rather than evaluations from medical science writers, they are in favor of encouraging non-medical publications to devote more, rather than less, space to health topics.

CARE FOR THE AGED

A year ago, an editorial appeared in this JOURNAL describing an institute for nursing home administrators that had been sponsored by the Iowa Nursing Home Association. This summer another such three-day institute was held, and along with specific problems in the care of nursing home patients, general topics such as "The Role of the Nursing Home in the Community" and "The Relationship of Organized Medicine to the Nursing Home" were taken up. It is obvious, then, that nursing home administrators realize that there is such a thing as an "old age problem."

It seems a pity that few other statewide or county groups have shown concern about the future of old people. The population as a whole, the community, seems almost totally uninterested. As individuals, furthermore, we prefer to hide our heads in the sand and hope that the problem never becomes of any particular importance. And though we are willing to grant that others may have a problem, we are insistent on believing that we never shall.

The statistics garnered by social workers indicate strong trends to the contrary. The average life expectancy increased from 49 in 1901, to 68 in 1950. Older people are becoming a larger segment of our population. The country's oldsters (over 65) have increased 36 per cent in number between 1940 and 1950. Forecasts indicate another 20-60 per cent increase above present day levels by 1980. The total *number* of people over 65 may almost double by 1980, the absolute increase being from 5,000,000 to 10,000,000. It follows therefore, that the housing problem for the aged person will become more acute unless active steps are taken to solve it. And inasmuch as these individuals are for the most part lacking in funds, the question of their medical care looms even greater.

Institutions and facilities for the care of the chronically ill are, at best, inadequate. (1) The private physician may care for the oldster in his home, if family finances warrant. (2) For poverty stricken patients, medical care is less complete than it should be because agency plans are inadequately financed by the community. (3) Out-patient clinics available in the largest cities give a certain amount of care to the destitute. (4) General hospitals can be used for short periods, but they rapidly erode the family pocket book. (5) Special hospitals such as tuberculosis sanitaria are usually excellent, and empty beds are available there, but mental hospitals are inadequately staffed and financed. (6) Some far-sighted individuals have proposed general hospitals for the chronically ill, to be operated in conjunction with existing general hospitals. These could provide care slightly less expensively and would be convenient for the practicing physician. (7) Old people's homes usually provide no more than a minimum of medical care. (8) Boarding homes do no better. (9) Nursing homes, to date at least, have been nothing to brag about, but the Iowa Nursing Home Association is endeavoring to better the care given in such institutions and to better the relationships between nursing home operators and physicians. That organization deserves our wholehearted support. Nursing homes are *private* institutions requiring aid.

Here is a challenging opportunity for the Iowa State Medical Society through its Subcommittee on Chronic Illness, and for individual county medical societies, to assist in helping meet the needs of aged patients. We need to be more directly cooperative with nursing home operators. Through our societies, we need to help in strengthening the authority of the public health officer, so that he may have power to make and enforce proper standards for homes that care for the aged. The homes should be inspected; they should have rules established for the care of the sick within their gates. It is the medical profession which should pioneer in that "cleaning up" process.

Finally, the community should consider the growing problem of the aged, so that plans can be made to meet new situations as they arise. Doctors can help their communities on that sociologic level, too. In Polk County, existing health agencies, hospitals and members of the county medical society have cooperated in making exhaustive pilot studies, and subsequently they have made recommendations for answering the needs of the community as those needs have become apparent. A concerted effort has been proposed to provide a clinic, together with hospital care as needed, at Broadlawns Polk County Hospital.

Medical societies in other counties can provide themselves with similar opportunities for studying their local situations, and can enhance public esteem for doctors by assisting in attempts to solve this vexing problem.

THE PHYSICIAN AS EFFICIENCY EXPERT

MINNESOTA MEDICINE, it seems, goes in rather heavily for guest editorials. One of such contributions which it has published most recently is a list of suggestions that may be a means by which doctors can help business executives avoid coronary thrombosis, hypertension, ulcers and the other ailments that sometimes result, in part at least, from worry and overwork. The author is Mr. Edward C. Schleh, president of a firm of management consultants.

There won't be universal efficacy in anything that doctors undertake to do with this list of "don'ts," for in such heart cases as the one that is now uppermost in all our minds, there is no evidence that the patients have made any mistakes. And it is doubtful that a physician would have the temerity to use it as the basis of a lecture to individual corporation executives on how they should run their businesses.

But perhaps, in attempts to use it altogether inoffensively, the G-P or the internist could take a page out of the psychiatrist's book, by asking the patient some discreet questions and waiting for him to note from his own replies some of the factors that are causing his difficulties. Here is the list, somewhat abbreviated and rephrased:

1. *Failure to delegate detail work.* "I remember a president who was doing detailed accounting and credit work. Another president was passing on all buying. . . . They were working 12 to 15 hours a day."

2. *Not requiring subordinates to plan.* "If a sales manager comes in crying 'Competition is getting rough' and gets by with it, he has simply dumped all of his responsibility for planning onto the president's desk."

3. *Committee-itis.* Group consideration of problems, though sometimes justified, is time-consuming, and committees, unlike individuals, cannot be held strictly responsible for their actions or failures to act.

4. *Avoidable jealousies.* Staff members whose responsibilities, for one reason or another, have disappeared look for things to do that will justify their existence. Generally, they look in other people's bailiwicks.

5. *Superfluous reports.* "As a company grows, it may easily succumb to a creeping paralysis of figure men."

6. *Refusal to countenance a few errors.* A grant of authority means nothing unless the man to whom it is given knows that it includes the liberty to make a few mistakes. If the subordinate feels that he will be in danger of losing his job the moment he ceases to bat 1000 per cent, he will consciously or inadvertently begin to toss his responsibilities right back into his boss's lap. Incidentally, the executive who doesn't permit his men "normal errors" is the sort who lets such little mistakes endanger his health.

7. *Too many immediate subordinates.* "Too many executives want to keep their fingers on everything. . . . For example, I know of a president who had 15 people reporting to him. . . . He had to put in long hours in order to supervise his men. At that, he did it poorly."

8. *Failure to keep company activities abreast.* Research, production, sales and the other divisions of a firm cannot safely be permitted to move forward at varying speeds. Their doing so will spell disaster not only in the profit-and-loss statement but in the executive's personal health record.

In conclusion, Mr. Schleh says, "It doesn't do any good to tell an executive, 'Don't worry.' He *has* to worry, or feels he has to. He's got problems. But if he learns to straighten out these problems by following good management and organization principles, he finds that he can relax. He can plan better. The cogs of the organization are meshing. The whole company goes ahead on a smooth, easy basis, and the executive, himself, is able to find time to relax and to play a little golf."

* "Stall the Executive Heart Attack," by Edward C. Schleh, president, Schleh Associates (Management Consultants). MINNESOTA MEDICINE, 38:644-647, (Sept.) 1955.

PHYSICIAN PLACEMENT SERVICE

Anyone who stops to consider the matter will understand that the work of a Physician Placement Service, such as is operated by the Iowa State Medical Society, involves somewhat more than compiling two lists—one of doctors seeking locations, and the other of communities seeking doctors—mimeographing them and mailing them out in answer to inquiries.

The place-hunting physician wants to know whether a particular community really needs another doctor and can support him; whether he can practice good medicine there; whether the physicians already located in that and the surrounding towns will welcome him; and, in some instances at least, whether his particular nationality and religious sect are well represented there. His wife frequently has some questions of her own to which she is quite as anxious to get rather detailed answers. The doctor-seeking civic leaders, on the other hand, want somewhat more than the names and addresses of people entitled to write "M.D." after their names. They want to have assurance, if they can get it, that the man to whom they offer special inducements is likely to be satisfied with the sort of practice he will find in their locality, rather than inclined to regard it as a stepping stone toward something bigger. But most of all, they want to be sure that the list given them isn't composed, to any considerable degree, of false leads—names of men

who have already selected places in which to practice, but have neglected informing the Placement Service of that fact.

The Subcommittee on Rural Health is providing our Society's Placement Service with evaluations of communities seeking physicians, with the result that the staff has relatively little difficulty in answering questions posed by the place-hunting doctor and his wife.

But the task of keeping the list of available physicians up to date is very troublesome. Doctors ask help from the Society in finding locations, but fail to send notifications when they have found what they want and are no longer available. Indeed it frequently happens that they fail also to answer inquiries that are sent them by the Placement Service and letters sent them by civic leaders to whom the Service has given their names.

If each of those newly-placed doctors could be persuaded to spare a moment to tell the Society that he is no longer in need of that one of its services, medical public relations could be spared altogether unnecessary strains.

MEDICAL SCHOOLS FACE PROBLEM

The fifty-fifth annual report of the AMA Council on Medical Education and Hospitals reveals that medical schools may have some difficulty in finding enough qualified students to fill their freshman classes next year. Applications have decreased in number during each of the past five years, and though it is hoped that a plateau has been reached, the problem is regarded as serious. Only 16.8 per cent of the entering classes in 1954-1955 had an "A" college record; 69 per cent had "B"; and 14.2 per cent had "C."

Though it is possible that the glamour of nuclear physics and the high compensation and short hours which that and other non-medical branches of science have to offer are causing capable young men and women to refuse medical training, the probabilities are that fewer young people are seeking to become physicians simply because, for the time being, there *are* fewer young people than usual. College graduates nowadays are men and women who were born during the Depression of the thirties, when birth rates were abnormally low. Within five years, the situation is expected to right itself.

There were 6,977 physicians graduated last year from 75 approved four-year medical schools, the report reveals. It was the sixth consecutive year in which a graduation record was set. The increase over the number graduated in 1950 was 1,400. Next year's class is expected to be slightly smaller, but afterward the number finishing each year will start to increase once more. Seven new schools will be graduating physicians by 1960.

The report stated that approximately 95 per cent of support for important research now conducted in medical schools is dependent on grants-in-aid from outside agencies. During 1955-1956, $54,500,000 is expected from those sources to pay for research, and $7,000,000 to pay for special teaching programs. These sums are in addition to the schools' $98,000,000 income from tuition, endowment income, legislative appropriations, gifts and grants that supports their basic teaching programs.

WISCONSIN RADIOLOGISTS CONGRATULATE ISMS

In a formal resolution adopted at its annual meeting in Lake Delton on October 8, the Wisconsin Radiological Society, Inc. extended its congratulations and support to the Iowa State Board of Medical Examiners, the Iowa Association of Pathologists and the Iowa State Medical Society for "their moral and professional courage" in opposing the suit brought in district court at Des Moines by the Iowa Hospital Association to have the hiring of specialists by hospitals declared legal.

The resolution quotes a joint statement made by the AMA and the AHA that "the medical profession and the hospitals recognize that certain special services such as anesthesiology, pathology, radiology and physical medicine are integral parts of the practice of medicine and of the services necessary for hospital patients," that "physicians in these fields should have the professional status of other members of the medical staff," and that "chiefs of these specialties must assume also the administrative responsibilities and relationships customarily associated with such positions."

The Wisconsin radiologists went on to point out that "medicine is a whole, and as such, incapable of actual division. . . . A threat to the independence of any of its component specialties is a threat to medical science as a whole."

In conclusion, the resolution urged "all practitioners of anesthesiology, pathology, physical medicine and radiology who conduct any part of their practice under contractual arrangements with hospitals . . . to pledge themselves as a matter of professional integrity, loyalty to their specialty, and interest in the independence of their profession, to make a prompt reexamination of their professional and economic relationship[s] . . . ," and to take prompt steps toward the correction of whatever moral, ethical or legal faults they find in them.

Attend the Annual Meeting of the Iowa State Medical Society April 22-25, 1956.

President's Page

Our group sickness and accident disability insurance program is now becoming a reality. There has been splendid cooperation by the members during the enrollment, and the administrators advise us that approximately 40 per cent of the eligible members have applied for the insurance. Many of the policies have already been issued, and we understand several claims have been paid.

The open enrollment period will definitely close on December 1 and, after that date, the insurance companies will not accept any member over age 60 or with any uninsurable medical history.

We feel that this group insurance program which is being sponsored by the society does provide an opportunity for our members to obtain very fine disability insurance without the usual restrictions and with a substantial saving to the members because of the group program.

I urge all of you to support this insurance plan, and I particularly urge those members who are interested in the coverage to enroll prior to the close of the open enrollment period on December 1.

L. R. Hess, M.D.
President

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

TEXTBOOK OF ENDOCRINOLOGY, ed. by *Robert H. Williams*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $13.00).

OFFICE PROCEDURES, by *Paul Williamson*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $12.50).

CANCER CELLS, by E. V. Cowdry, M.D. (Philadelphia, W. B. Saunders Company, 1955. $16.00).

SURGERY OF THE AMBULATORY PATIENT, Third Edition, by *L. K. Ferguson*, M.D. (Philadelphia, J. P. Lippincott Company, 1955. $12.00).

THE YEAR BOOK OF MEDICINE (1955-1956 Year Book Series), by *Paul B. Beeson*, M.D., *Carl Muschenheim*, M.D., *William B. Castle*, M.D., *Tinsley R. Harrison*, M.D., *Franz J. Ingelfinger*, M.D., and *Philip K. Bondy*, M.D. (Chicago, The Year Book Publishers, 1955. $6.00).

THE NATIONAL FORMULARY X, published by the American Pharmaceutical Association. (Philadelphia, J. P. Lippincott Company, 1955. $9.00).

PRESENT-DAY PSYCHOLOGY, ed. by *A. A. Roback*. (New York, The Philosophical Library, 1955. $12.00).

BASIC SURGICAL SKILLS (A Manual With Appropriate Exercises), by *Robert Tauber*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $3.75).

CARDIAC DIAGNOSIS: A PHYSIOLOGIC APPROACH, by *Robert F. Rushmer*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $11.50).

INTERNATIONAL SYMPOSIUM ON CARDIOVASCULAR SURGERY: STUDIES IN PHYSIOLOGY, DIAGNOSIS AND TECHNIQUES (Henry Ford Hospital, Detroit, March, 1955), ed. by *Conrad R. Lam*, M.D. (Philadelphia, W. B. Saunders Company, 1955. $12.75).

BOOK REVIEWS

COUNSELING IN MEDICAL GENETICS, by *Sheldon C. Reed*, M.D. (Philadelphia, W.B. Saunders Co., 1955. $4.00)

This is a most useful, and, in some respects, amazing little book. The author is to be complimented on the interesting and frequently witty manner in which he has presented what could have been dry statistics.

It provides clear answers for many of the questions that are frequently asked of the general practitioner, the pediatrician and the obstetrician. How many of us, for example, would know offhand that if a patient has a child with a harelip and cleft palate, her chance of having another child with the same deformities is one in seven, that the chance of her having a child with congenital heart disease is one in fifty, and so forth down through the list of common hereditary and congenital disorders?

There are many other fine features of the book. There is a very interesting chapter on "Disputed Paternity" in which some of the cases we all have read about are discussed. At times, the solutions offered are amazing.

All in all, it is a very worthwhile study—fascinating to some, but interesting to everyone—*H. Kirby Schiffler*, M.D.

SHOULD THE PATIENT KNOW THE TRUTH? A Response of Physicians, Nurses, Clergymen, and Lawyers. Ed. by *Samuel Standard*, M.D., and *Helmuth Nathan*, M.D. (New York, Springer Publishing Company, Inc., 1955. $3 hard cover, $2 soft cover).

Out of a discussion at a meeting of the New York Academy of Medicine on the topic "Should the Patient Know the Truth?" came the idea for this book. The number of authorities was widened to include medical doctors, nurses, lawyers and members of the cloth. The compilation which ensued resembles Edward R. Murrow's THIS I BELIEVE. It is a series of essays written on various phases of the subject discussed. Dr. Owen Wangensteen believes that we should tell the truth to all patients—an "unqualified 'Yes.' " Dr. Henry Cave, on the other hand, believes that "not to know the truth will cause the least mental anguish to many patients and that a surgeon may have to carry out deception, no matter how distasteful this may be to him."

Chapters by lawyers, priests, rabbis and ministers are at variance in philosophic particulars, but agree on basic principle: First, do no harm!

We all have our own ideas about how to answer this problem, but in this little book are other viewpoints, described by better men than we. Perhaps we can gain from them. The book was fascinating to the reviewer. Its essays are succinct and colorful. The subject matter is one in which every practicing physician must be concerned. Physicians philosophically inclined will find much joy in its pages.—*Daniel A. Glomset*, M.D.

CIBA FOUNDATION SYMPOSIUM ON HYPERTENSION (Humoral and Neurogenic factors), ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Margaret P. Cameron*, M.A., A.B.L., assisted by *Joan Etherington*. (Boston, Little, Brown and Company, 1954. $6.75).

One of a series of symposia conducted at the Ciba Foundation in London is reported in this volume. Like others in the series, it consists of reports from pioneering research workers in many countries.

Under the chairmanship of G. W. Pickering, of London, the experts have explored the roles of drugs, electrolytes, carotid sinus reflexes, the sympathetic nervous system and various humoral factors in hypertension. Perera, of New York, reports the interesting observation that hypertensive vascular disease may progress even to papilledema during a period of normal blood pressure readings. Diaz, of Madrid, advances the theory that noradrenaline may be formed in the walls of arteries.

The role of the kidney in experimental hypertension is discussed by Bing, of Copenhagen, Floyer, of Lon-

don, Govaerts, of Brussels, among others. Electrolyte studies are reported by Genest, of Montreal, Braun-Menendez, of Buenos Aires, and Martini, of Bonn.

The give-and-take of informal discussion after each paper is a stimulating and illuminating part of this little volume.

Like others in the Ciba Symposium series, this volume will appeal chiefly to research workers and investigators in specialized fields.—*Herman J. Smith,* M.D.

Premature Infants, by *Ethel C. Dunham,* M.D., (New York City, Paul B. Hoeber, Inc., 1955. $8.00)

The second edition of this standard work has been revised in several ways. The first edition, which appeared in 1948, was a paper-bound publication of the United States Children's Bureau. This edition is printed on a better grade of paper and in a more pleasing manner, it is bound in cloth and it is presented by a publisher of many other standard medical books.

The author deals with her subject very thoroughly, and in such a way that her book serves as an excellent guide to the general care of that class of patients. Apparently a wide variety of source material has been utilized, and the bibliography provides the reader with excellent references in case he wants further details.

The text is well-written, its style is easy to follow, and the tabulations and illustrations add greatly to its value. The book is recommended to all those who deal with the premature infant problem in any of its facets: the physician, the supervisor of the premature section in a hospital, and public health workers.—*M. E. Alberts,* M.D.

Antibiotics Annual, 1954-1955 (Proceedings of the Second Annual Symposium on Antibiotics), ed. by *Henry Welch,* Ph.D., and *Felix Marti-Ibanez,* M.D. (New York City, Medical Encyclopedia, Inc., 1955. $10.00)

The Antibiotics Annual is a collection of papers presented at the Second Annual Symposium on Antibiotics sponsored by the U. S. Department of Health, Education and Welfare. It is quite a large book, for it contains 1,154 pages. One hundred seventy-two articles are included, covering all phases of the subject. Great credit should be given to the investigators who have done the research published therein, and to the drug houses that produced some 2,000,000 pounds of these drugs in 1953.

The book is composed of many individual papers that have little connection with one another except that they deal with various phases of the same subject. Some of them undertake to answer rather technical research questions, and others have to do entirely with clinico-bacteriologic problems. Some articles are written by physicians familiar to many of us, but others of the authors are strangers. Most of the papers are well written and well documented, and most of them are authoritative.

The book belongs in hospitals and in medical libraries for reference purposes, for even though it would benefit the average physician, it isn't the sort of thing that he would particularly enjoy reading in his spare time.—*D. A. Glomset,* M.D.

Management of Disorders of the Autonomic Nervous System, by *Louis T. Palumbo,* M.D. (Chicago, The Year Book Publishers, Inc., 1955. $5.00)

The monograph was written for the general practitioner and the medical student, rather than for the specialist.

The author presents a condensation of a vast amount of material in an effort to stress recognition of disease conditions in which the autonomic nervous system is important. From his extensive experience, he has made a lucid presentation of the pharmacologic and surgical alternatives among which the physician may choose, in treating the various entities, but he has not intended to make his work a surgical tome.

The book should be of value of all physicians who are concerned with pain mechanisms, vascular disturbances, and abnormal gastrointestinal and genitourinary entities, and who wish to employ a new concept of treatment for these conditions that certain of the so-called advances of civilization have made prevalent.—*Walter D. Abbott,* M.D.

Collected Papers of the Mayo Clinic and the Mayo Foundation, 1954, ed. by *R. H. Hewitt,* M.D., *A. B. Nevling,* M.D., *J. R. Miner,* B.A., *J. R. Eckman,* Ph.D., *M. K. Smith,* B.A., *C. M. Gambill,* M.D., *F. Schmidt,* B.S.E., and *G. G. Stilwell,* M.D. (Philadelphia, W. B. Saunders Co., 1955. $12.50)

According to the foreword, the material for this present volume of the Collected Papers of the Mayo Clinic was "selected primarily with interests of the general practitioner, the general surgeon and the diagnostician in mind." The papers appearing in full or abstracted in it are representative of articles that have appeared in various journals and speeches that have been delivered in various cities throughout the country. Those that have been published in Proceedings of the Staff Meetings of the Mayo Clinic are listed only by title.

These papers, most of which were prepared for delivery at annual meetings of state medical societies and other such gatherings of doctors, are characterized by the utmost clarity of thought and composition. Therefore, they are easy for one to read at night when he is tired from the labor of the day. The only criticism the reviewer has to offer—and it is one that is applicable to all of the Mayo Clinic writings—concerns their failure to reflect the varied personalities of the writers, as English papers do. The style of the offerings is rather cold, monotonous and ultra-scientific. It lacks sparkle.* The subject matter is the boiled-down common sense of the present day treatment of disease at the Mayo Clinic.

There is little in the volume that could be labeled "new" or "research." But for that very reason, though it may be somewhat less than exhilarating, it is extremely valuable reading material for the practicing physician.—*D. A. Glomset,* M.D.

* A delightful exception to this rule is an article by H. Burchell, M.D., on "Unusual Forms of Heart Disease."

BLUE CROSS



BLUE SHIELD

Doctors Must Lead Blue Shield

Many doctors have been giving considerable thought to the possibilities of improving their Blue Shield Plan. This has been especially true subsequent to the annual meeting of the Iowa State Medical Society last April. Councilor district meetings are being held for the express purpose of enabling individual doctors throughout the state to assist in the development of a plan that will be satisfactory to all concerned.

Dr. Robert L. Novy, president of the Michigan Blue Shield Plan for 13 years, recently published an article in THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY that deserves our consideration as we undertake to make Iowa's Blue Shield Plan a leader in the field of prepayment care.

"Organized medicine in the U. S.," Dr. Novy says, "has a formidable instrument in Blue Shield for maintaining the balance of control in the surgical-medical prepayment field, for influencing the competitive quality and scope of all of the coverages, and for providing the people with an honest, objective and professionally realistic standard of coverage."

During the last few years, prepayment has snowballed into a multi-billion dollar business. A sizable and growing number of those dollars are received and dispensed by Blue Shield's competitors, free of professional control or recommendation. As Dr. Novy puts it, "It is imperative that the medical profession step in vigorously in today's prepayment developments and make its influence felt."

Emphasizing that doctors should forever bury the outmoded notion that Blue Shield is no more than a necessary evil, Dr. Novy calls attention to the fact that developments in the prepayment field have already endangered the interests of the profession. "It would be nothing but folly on our part," he declares, "to continue nursing our complacency and smugness while the billions in premiums and reserves build up a power beyond our control."

Dr. Novy proposes a three-point program:

1. Set a goal to get the surgical-medical prepayment field under the control of medically directed Plans.
2. Reappraise and recognize Blue Shield as the only effective means for making professional views and standards felt on the competitive market.
3. Think in line with realities of the situation, rather than bemuse ourselves with quantitative statistics.

He concludes that unless the concept of professional responsibility is extended to the prepayment field, medicine may become the pawn of those who control prepaid billions, and the public may be left to build its prepayment program in a medical vacuum.

Your Blue Shield President Reports:



We have done considerable work toward the development of a more realistic Blue Shield fee schedule. Practically all of the specialty groups have submitted their members' thoughts on the matter, and these will be reviewed by the Medical Advisory Committee and the Board of Directors of your Blue Shield Plan.

A number of district and county meetings have already been scheduled to take place in November, and we hope that all doctors will attend them so as to give us the benefit of their considered judgment. As this is written, the following dates have been established:

November 7 ..... Delaware County Medical Society, Manchester
November 8 ..... Dubuque County Medical Society, Dubuque
November 15 ..... Second Councilor District, Mason City
November 17 ..... Mercy Hospital Staff Meeting, Cedar Rapids
November 22 ..... Fifth Councilor District, Boone

One of the most difficult of the problems that make up your Board's task is that of medical care and its compensation. Internists, pediatricians and general practitioners have made various recommendations along these lines. Others have called our attention to various inequities in the fee schedule.

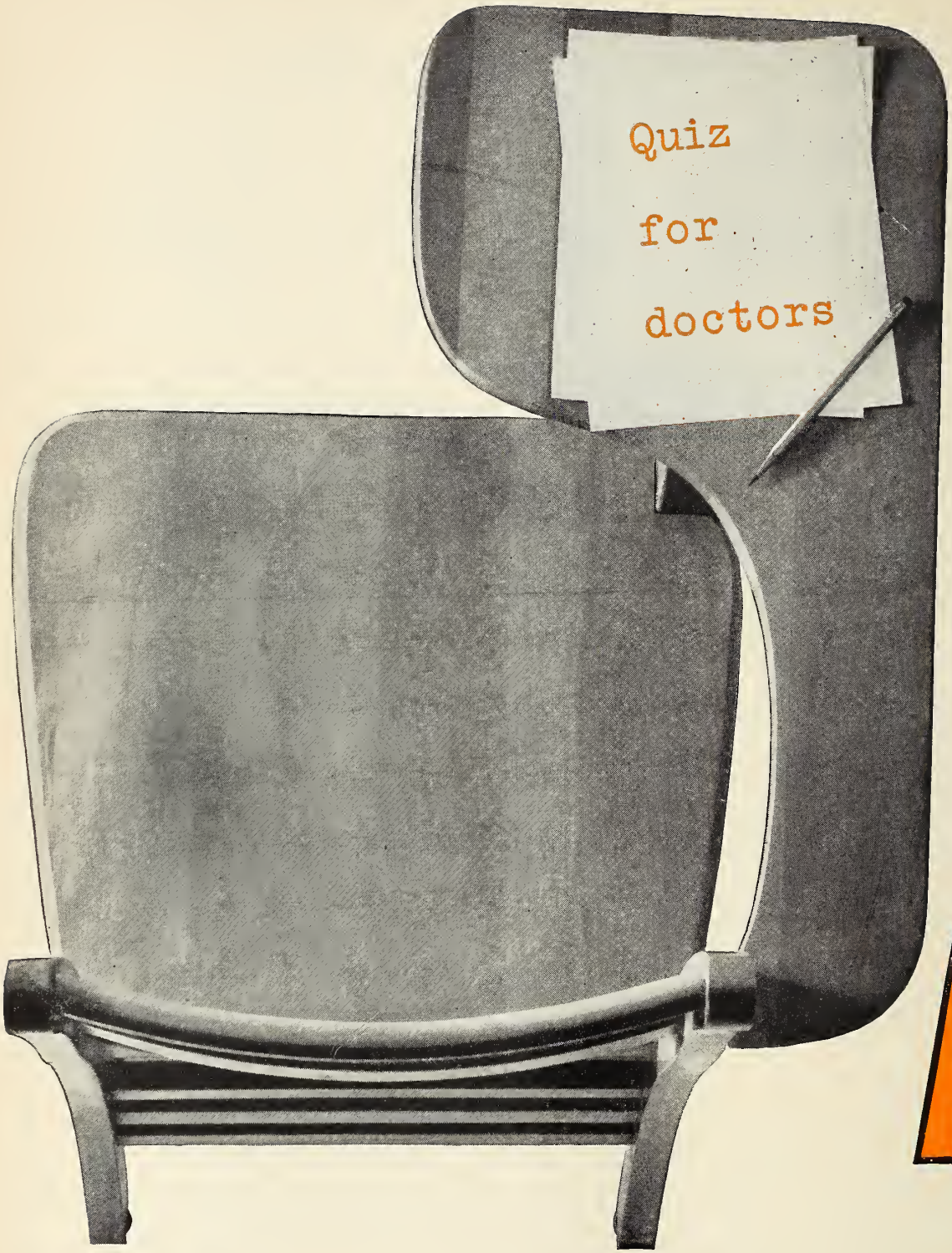
The coverages to be included in the new contract, as well as the fees to be paid to member physicians, will determine the final premium rate.

Our objective is the development of a prepayment plan that will meet with the greatest possible acceptance both from the public and from the medical profession.

Sincerely,

Martin F. Olsen M. D.

President


Quiz
for
doctors

you probably know every answer!)

Q. Which is today's most widely prescribed broad-spectrum antibiotic?

A. ACHROMYCIN — it's first by many thousands of prescriptions.

Q. What are some of the advantages of ACHROMYCIN?

A. Wide spectrum of effectiveness.
Rapid diffusion and penetration.
Negligible side effects.

Q. Exactly how broad is the spectrum of ACHROMYCIN?

A. It has proved effective against a wide variety of infections, caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa.

Q. In what way are ACHROMYCIN Capsules advantageous?

A. For rapid and complete absorption they are dry-filled, sealed capsules (a Lederle exclusive!) No oils, no paste...tamperproof.

Q. Who makes ACHROMYCIN?

A. It is produced — every gram — under rigid quality control in Lederle's own laboratories and is available only under the Lederle label.

IROMYCIN*

Hydrochloride
Tetracycline HCl Lederle

Lederle

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY PEARL RIVER, NEW YORK

*REG. U.S. PAT. OFF.

Iowa Academy of General Practice

NEWS FROM THE AAGP

A progress report on the activities of our national organization may be of considerable interest to the doctors of the state, especially the men in general practice.

MEMBERSHIP

It is heartening to see the upsurge of new members occurring *just ahead* of an increase in our effort to get enrollment up to where we would like to have it. There are still a great many general practitioners over the country waiting for an invitation to join us. We want to get this job done as soon as possible. We have set 3,000 new members as our goal for this year, and it appears now that we shall exceed it. The AAGP has much to offer its members, and our services to members can and will increase as we grow.

STUDY REPORTS

A step has been taken that will partially alleviate one of the odious duties of our members, namely that of reporting study credits. From now on, when a postgraduate study course is given Category No. 1 credit (formerly known as "formal credit"), members of the Academy will be asked to sign attendance cards at the registration desk. These will be returned to the member's state chapter secretary for filing. Then they will be on hand for use by the local credentials committee at recertification time.

Unfortunately, no new method has yet been devised for taking care of Category No. 2 credits (formerly "informal credits"), for they can be earned through attendance at various hospital meetings and county and state sessions, as well as many other types of scientific gatherings. But give us time! Some plan will eventually evolve.

RESIDENCY REVIEW COMMITTEE

A committee to study the general-practice residency problem has been established, consisting of Dr. William Shaw, of Fayette, Missouri, Dr. Louis Rittlemeyer, of Jackson, Mississippi, Dr. Jesse Rising, of Kansas City, Kansas, and representatives of the AMA.

It is felt that a high percentage of general-practice residencies are worthless, and this committee is studying the situation in order to make the improvements that are necessary if young doctors are to be attracted to them.

NEW HEADQUARTERS BUILDING

The new headquarters building in Kansas City is well under way. Although construction is somewhat behind schedule at the present time, it is hoped that it can be completed about February 1 of next year. A dedicatory program is being planned, at which a prominent medical man will be the principal speaker.

GENERAL PRACTICE DEPARTMENTS

There are now two medical colleges with fully operating general practice departments: the University of Tennessee, with Dr. Wm. Davison in charge, and the new four-year medical college at the University of Mississippi, with Dr. Louis Rittlemeyer at its head. The department at Memphis is the older and is under careful control. Its success is being watched closely by many medical educators. So far, it is thought to be definitely superior to preceptorships.

GP'S IN HOSPITALS

In July, Dr. Chas. Cooper, of St. Paul, chairman of the AAGP Commission on Hospitals, spent a day in Chicago with Dr. Kenneth Babcock, chairman of the Joint Commission on Accreditation of Hospitals. The approval by the Joint Commission of the AAGP's manual for establishing general practice departments in hospitals was reasserted.

In some hospitals, the holding of GP clinical sections has not interfered with the hospitals' being accredited. Eventually, it is hoped, sectional meetings of general practice departments will be given credit for review of cases. Of course, all executive and punitive powers must still remain in the specialty section involved.

SURVEYS

A number of investigations are being made dealing with the problems of postgraduate medical education. The American Academy is about to make a study of the comparative values of the various media of communication. The results of this particular study will have far-reaching effects on all postgraduate medical education. This

may make some definite changes necessary in our system of study credits.

These are but thumb-nail sketches on a very few activities of the AAGP, but they indicate some of the trends we find in existence. We are keeping at work trying to furnish the American public with better family doctors.

GASTROENTEROLOGY FOR GP'S

The University of Minnesota will hold a continuation course in gastroenterology for general physicians at its Center for Continuation Study, in Minneapolis, from December 1-3. Dr. Henry L. Bockus, chairman of the Department of Medicine at the University of Pennsylvania Graduate School of Medicine will be the principal guest lecturer.

ENDOCRINOLOGY FOR GP'S

The University of Nebraska College of Medicine will conduct a course in endocrinology for general physicians at the Nebraska Psychiatric Institute Auditorium, in Omaha, November 8-10. The guest speakers are to include Dr. Raymond Keating, of the Mayo Clinic; Dr. Bentley P. Colcock, of the Lahey Clinic; Dr. Henry H. Turner, of the University of Oklahoma School of Medicine; Dr. Benjamin B. Wells, of Creighton; Dr. Vincent C. Kelley, of the University of Utah College of Medicine; Dr. Franklin C. Peck, Sr., of Eli Lilly & Co.; and Dr. C. W. Daeschner, of Baylor University College of Medicine. The registration fee is $25.

MENTAL ILLNESS

INVOLUTIONAL PSYCHOSIS

Not only doctors but a large number of lay people as well are aware of the involutional period most frequently referred to as the "change of life." It is an epoch common to men and women in which chemical and endocrinologic changes occur, and they seem to be accompanied by a mental and emotional reaction. It is the beginning of the regressive period. There is a more or less conscious recognition that the zenith of life is past, that the flexibility of youth is gone, that life's strength is waning and that the future has nothing in store. Since life cannot be lived over and since there no longer will be opportunities for repairing old errors or achieving new successes, the individual develops a feeling of frustration and insecurity, in addition to family worries and whatever discouragements have resulted from specific reverses and disappointments.

One cannot definitely say when the involutional period starts and when it ends, but roughly it may be put between the ages of 40 and 55 in women, and between 50 and 65 years in men. It affects more women than men.

A heredity can be traced in a number of these cases. Family medical histories won't show a succession of involutional psychoses, but they will disclose a series of serious nervous disturbances of one form or another.

The condition may be predicated upon changes in the sex glands and perhaps in other endocrine structures, but it appears that in most cases an extraordinarily severe or prolonged nervous or emotional stress is at least a secondary cause.

In mild form, this condition is more widespread than is realized, and there are cases which become severe enough to seek medical assistance or gravitate to institutions. The manifest symptoms of the psychosis are often preceded by a period of several weeks or a few months during which the patient exhibits hypochondriacal trends, becomes irritable and peevish, suffers from insomnia, perhaps is suspicious, shows a disinclination for effort and may be given to spells of weeping.

The psychosis of the involutional period is characterized most commonly by depression, even though there may have been no history of manic-depressive reaction. It presents a continuous picture of depressive apprehensive, anxious affect, along with psychomotor activity. Some cases show a sensory somatic complex—abnormal bodily sensations, hypochondriacal trends and feelings of unreality. The patient may refuse food because he believes it poisoned, because he has some ridiculous idea about his lacking a stomach or having an intestinal obstruction, or because he believes himself unworthy. Some cases present a guilt feeling, and suicide is frequently attempted.

In some cases, the psychosis has a distinct paranoid coloring. The delusion usually revolves around ideas of persecution.

There is a very slight clouding of consciousness. The patient is mostly oriented, his memory is good and he realizes to a certain extent that he is ill.

Patients suffering from involutional psychosis should usually be cared for in an institution for mental disorders, especially since there is no other type of mental ailment in which so large a number of patients attempt suicide.

Although estrogenic hormones help to relieve menopausal symptoms such as hot flashes, sweats, tensions, uneasinesses and headaches, they are of little use in involutional psychoses. Electroshock is beneficial in most cases, if the physical condition of the patient will permit it. Indeed, electroshock often enables patients to resume normal behavior. But it should be followed by psychotherapy and occupational therapy.

STATE DEPARTMENT OF HEALTH

Edward D. Zimmer
COMMISSIONER

BIRTH AND DEATH CERTIFICATION

Successful planning of many programs in the field of medicine are partially dependent upon the availability of reliable statistics. Such data frequently are taken from the birth and death certificates filed with the Division of Vital Statistics, Iowa State Department of Health. Thus, it is important that the certificates be filed in altogether complete form and within the time limits specified by statute.

Even though the portions of birth and death certificates to which the physician must attest is generally most complete, certain items are omitted from time to time. A study of these omissions is in progress in the offices of the Division. The problems of filing certificates within the legal time limitations vary greatly among the counties of the state, as is shown in the accompanying maps for both birth and death certificates filed during the period 1949-1953. Few significant changes have taken place since the original five-year evaluation.

It certainly cannot be assumed that responsibility for failure to file a certificate of birth within ten days following the event or failure to file a death certificate within 72 hours following death belongs entirely to the physician. However, the physician, by placing himself in a position of leadership, can aid greatly in expediting the filing of the certificate, thus improving the quality of the statistics available to him and his associates.

By law, the physician is responsible for all data on the certificate of birth. In actual practice, this information is gathered primarily by the staff of the hospital in which the birth has occurred, and the physician signs the certificate—often with no more than a cursory review to see that it is completely in order. Obviously, such a procedure should be fool proof, but too often the system fails because the doctor is not available when the certificate is ready for his signature or because he decides that certain circumstances, such as birth injuries, congenital malformations, etc., need clarification. Accordingly, he takes the certificate to his office, where it remains in a desk drawer until the end of the month or until his desk is cleaned. In counties where the "on time" registration of births is less than 90 per cent, doctors would do well to reevaluate the procedures being used. By that means they can ascertain whether or not they can be of assistance in bringing the percentage to a higher level.

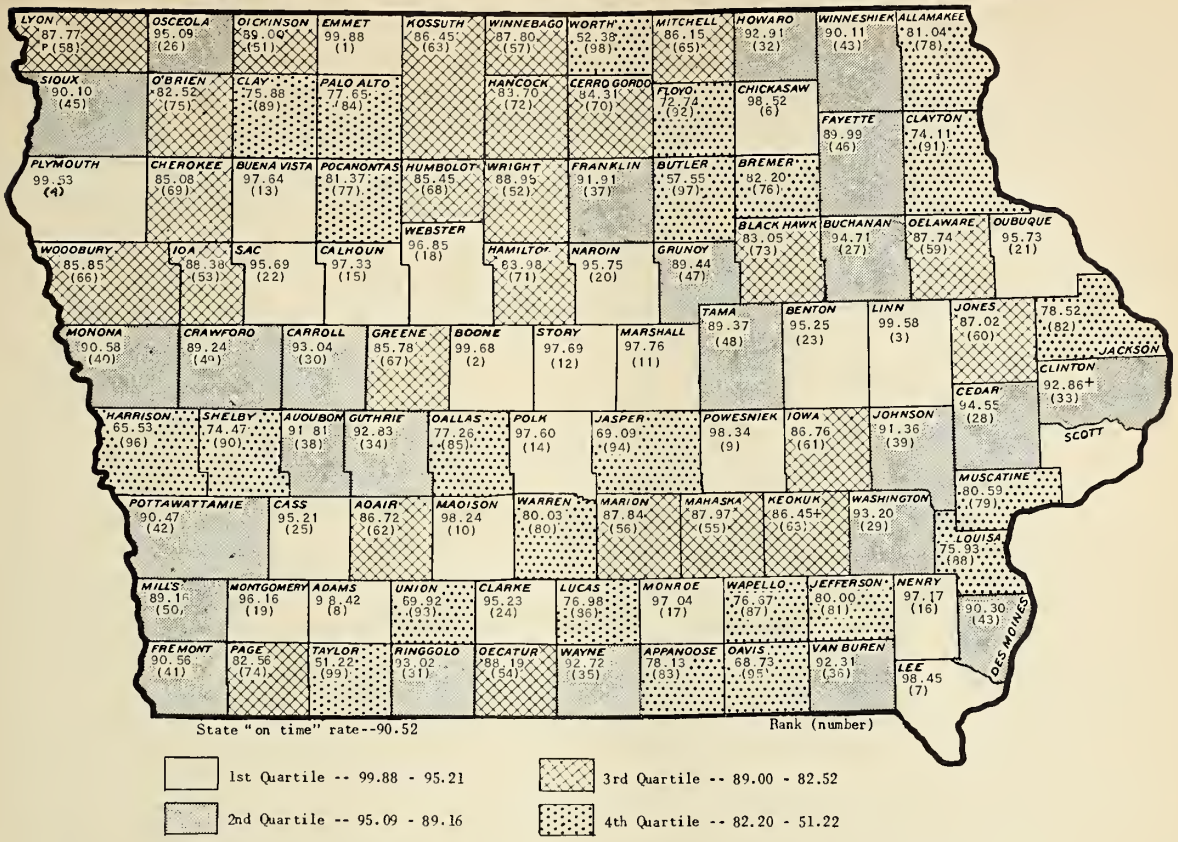
Since other factors are involved, the problems of filing a death certificate within 72 hours following death are complex. Although the funeral director is responsible for filing the certificate, he must rely on a doctor for certification as to the cause of death. If the physician is not readily available at the time of death, or if he is not certain of the cause that he wishes to assign, a delay often occurs. When it is necessary that the doctor wait for autopsy findings before reaching a final conclusion, he should certify to a probable cause, and file an amendment later, if necessary. Again, if the percentage of death certificates filed "on time" in the county is lower than 90 per cent, physicians should use their hospital staff organizations or their medical societies in correcting the situation.

Every three months, hospital administrators, county clerks and local registrars are provided information regarding the percentages of certificates filed "on time" in each of the counties in the state. Because doctors frequently find statistics important in their work, both as individuals and as organized groups, they should be concerned with the manner in which reports of their activities are being relayed to state health authorities.

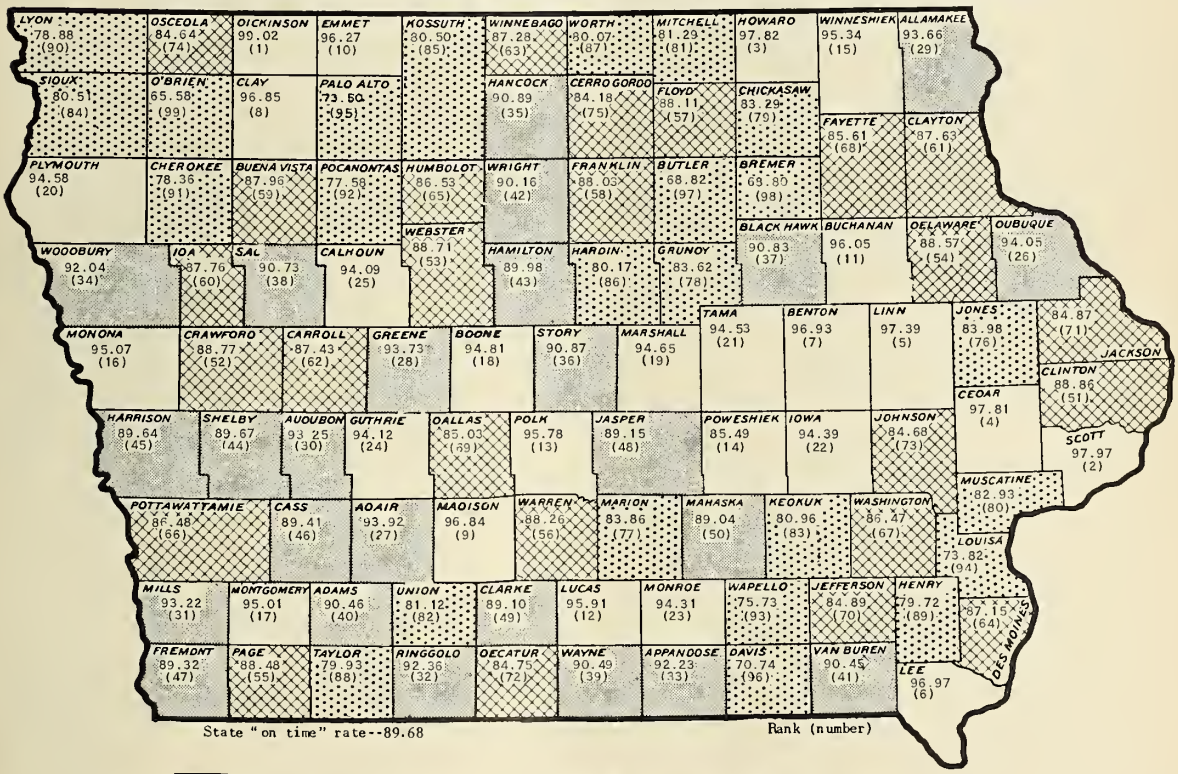
MORBIDITY REPORT

Disease	*Sept. 1955*	*Aug. 1955*	*Sept. 1954*	*Most cases reported from these counties:*
Diphtheria	0	0	0	.....
Scarlet Fever	5	11	9	Scattered
Typhoid Fever	2	1	4	Black Hawk, Davis
Smallpox	0	0	0	.....
Measles	62	61	84	Carroll, Cass, Black Hawk, Buena Vista
Whooping Cough	38	46	36	Dubuque, Floyd, Scott
Brucellosis	19	24	22	Black Hawk, Buena Vista, others scattered
Chickenpox	10	10	26	Dubuque
Meningococcus Meng.	0	0	4	.....
Mumps	92	68	133	Des Moines, Dickinson, Humboldt
Poliomyelitis	115	220	446	Lee, Linn, Polk, 23 paralyic; 84 nonparalytic; 8 unspecified
Infectious Hepatitis	36	32	174	Hamilton, Linn
Rabies in Animals	10	6	14	Scattered
Tuberculosis	37	46	50	For the State
Syphilis	95	76	118	For the State
Gonorrhea	61	50	61	For the State

"ON TIME" REGISTRATION OF IOWA BIRTHS, 1949-1953—County Percentages and Ranks



"ON TIME" REGISTRATION OF IOWA DEATHS, 1949-1953—County Percentages and Ranks



THE DOCTOR'S BUSINESS



Your Life Insurance Program

MILLARD K. MILLS

WATERLOO

"How much life insurance should I have?" is one of the most difficult questions that a doctor must answer. A face value equal to four times one's annual income, or maximum premiums amounting to 10 per cent of earnings will constitute a good rule of thumb, but there is no standard reply. Many other factors are involved.

You must consider your outstanding debts, your children's educational needs, an adequate income for your wife in case of your death, and your own retirement plans.

Then, you must realize that all of those responsibilities need not be met solely through your life insurance. If you fail to coordinate it with your other investments, you may well be paying out money for unnecessary protection. Remember, too, that insurance policies are "fixed-dollar" contracts. Since in the past, inflation has proceeded at the rate of at least three per cent per year, you must expect the proceeds of your insurance to buy substantially less than they would if they could be spent now.

Here is some general information that should be helpful to you in deciding what to do:

1. The primary purpose of life insurance is to give you protection. It is the cheapest and best protection you can buy.

2. Term insurance has no cash value, but it is least expensive of all for protection only. If you buy it, be sure you get renewable and convertible policies.

3. Ordinary life insurance provides protection with a cash value. It has the lowest net cost and is the lowest premium whole-life insurance that you can buy. Various plans are available.

4. Endowment insurance emphasizes savings, rather than protection. Although its investment yield is low and the protection it gives is limited, it is a forced savings plan for those who might not otherwise set aside money for future use.

5. Annuities are also mainly a savings plan and can be purchased in many forms. They are a means of providing a fixed income, particularly to older persons.

The wise doctor will survey the field in order to find out what is available, and he will want to be sure of what he is getting. He will look into the history of insurance companies. He will compare cash surrender values, loan privileges and optional modes of settlement. He will also compare premiums before he decides. (Annual premiums will save money for you. On any other than an annual basis you pay about six per cent interest.)

Particular attention should be given to modes of settlement. Lump sum payments are useful for settling outstanding obligations, taxes and funeral expenses.

Installment payments for a fixed period assure income to the beneficiary for a definite length of time. You will want to be sure of providing it for as long as will be necessary.

Proceeds of life insurance may be left with the company at interest for emergency or educational needs. Life-income options are available in various types. If you make that choice, the amount of each of the beneficiary's monthly checks will be determined by his or her age at the time they are started.

And don't overlook the tax angles! Insurance policies vary, and they are difficult to read. Many people make mistakes in purchasing life insurance. We strongly recommend that you select an insurance agent who is reliable and whom you trust. Then make him responsible for your program.

Remember that life insurance can be purchased for protection and/or for savings. In buying it, your primary aim should be to get the most protection for the lowest cost, without sacrificing safety.

Before buying insurance for old-age security or financial emergencies, don't overlook other and perhaps more remunerative opportunities for investment. If you select the way or combination of ways best suited to your objectives and your income, your insurance program will be *right for you.*

Mr. Mills is general manager of Professional Management.

WOMAN'S AUXILIARY NEWS

MRS. EDW. B. HOEVEN, *Woman's Editor*
224 East AltaVista, Ottumwa

MRS. WILSON WOLFE, *Asst. Woman's Editor*
N.E. Elm Street, Ottumwa

LINES FROM THE PRESIDENT

GIVE THANKS FOR LITTLE THINGS

Let me be glad the kettle gently sings,
Let me be thankful just for little things;
Thankful for simple food and supper spread,
Thankful for friends who share my woe or mirth,
Glad for the warm, sweet fragrance of the earth;
For golden pools of sunshine on the floor,
For love that sheds its peace about my door.
For little friendly days that slip away,
With only meals and bed and work and play,
A rocking chair and kindly firelight—
For little things let me be glad tonight.

—JAMES WHITCOMB RILEY

Our memories of the really old-fashioned Thanksgiving Days really are not memories at all. They are impressions derived from stories, poetry and song. Even in our childhood, preparations for the holiday dinner were by no means so arduous as they had been in the days of the Pilgrims, and were still in Riley's day, less than a century ago. But who can say that our last minute, hurried efforts are less effective? Indeed, the kitchen apparatus that has been developed for us, the turkeys that we buy frozen but otherwise ready for the oven, and the other delicacies that are now available to us wholly or partially prepared are some of the facets of the American Way of Life for which we should remember to be grateful.

But in more important ways, Thanksgiving Day is much the same now as it always has been. Its essence is in the quiet enjoyment of the blessings that our forbears had no less than we—the companionship and affection of family and friends. Contentment settles over our households, and we express our thanks both overtly and by spending the day in rest and in family living.

Let us thank God for our wonderful, free country, and let us pray for guidance in our attempts to serve and to love our fellowmen.

BOARD OF DIRECTORS' CONFERENCE

We had a most inspirational and informative two-day Fall Conference of the Board of Directors on September 14 and 15. Your interest was manifest in the excellent attendance, and I appreciated it.

Briefly, I shall summarize the reports given by our chairmen on their summer activities and on their plans for the fall and winter. We have approximately $3,000 in the treasury. Our AMEF chairman asks that we support the 80-Dimes campaign, of which the AMA will send you information this fall. Last year Iowa donated $260.70 to AMEF, or $.30 per member. We can do better! Among our membership of 1,000, we have 62 subscribers to the BULLETIN. Let's make a better record this year. It's well worth $1.00 to see what other state Auxiliaries are doing.

We have had handicapped sales in Des Moines, Burlington, Fort Dodge and Spencer. In the last named of those towns, Clay County has just finished its first sale, doing very well. The articles sold brought in more than $550.

Those of us who attended the Fall Conference were privileged to hear Dr. Herbert Merillat, of Des Moines, speak on mental health. He gave us many ideas to stimulate our thinking on the ever increasing problem of the mentally ill. Mr. Robert Throckmorton brought us up to date on medical legislation, saying that we doctor's wives can help by being interested, by keeping track of the measures that are proposed and by discussing them with our husbands.

Mr. Donald Taylor gave an interesting report on the law suit at Des Moines in which the Iowa Hospital Association is attempting to upset opinions by the Attorney General that hospitals violate the Medical Practice Act when they employ pathologists and radiologists. Members of the Auxiliary are encouraged to attend the trial when they are in Des Moines.

Mr. Ray Stewart, the public relations director for the State Medical Society, told of the projects that he has started. A history of the Blue Shield in Iowa is being prepared for publication, giving reasons for the increased costs of medicines and medical care. Paid newspaper advertising is being used in publicizing the policies of the State Medical Society. A film library is being set up at the Society's office, from which clubs, churches and other groups may borrow, and a list of the pictures that are available will be ready within a short time. Mr. Stewart asked for the Auxiliary's assistance in distributing those lists. And the State Medical Society is sponsoring a Child Safety campaign. A booklet entitled "What's the Answer?" which will be distributed through the pharmacies, will put safety information into parents' hands, and county societies can assist in getting fairs, conventions and other meetings in their areas to grant space for flash-card exhibits that the AMA will lend, charging only for shipping costs.

Mr. Stewart also proposed the establishment of speakers' bureaus by the county medical societies. He said that the public should be informed of the availability of doctors as speakers, and that there is no reason why medical men should limit themselves to medical topics. He concluded by promising that by 1956 the State Medical Society will have a well-rounded public relations program and that Auxiliary members will be told of what they can do to help with it.

Our Civil Defense goal for this year is to have ten per cent of Auxiliary homes well protected in each county, and ten per cent of Auxiliary members taking part in some Civil Defense activity.

The State Medical Society's Woman's Auxiliary Advisory Commmittee has counseled us not to ask for a governor's proclamation of Doctor's Day, for the time being, and consequently our recognition of that occasion must be put on an individual county basis this year. We urge that each county Auxiliary recognize its doctors by sending them each a red carnation on March 30, 1956.

A Program Panorama is being prepared by Mrs. Merillat and will be sent out to county presidents in the near future.

Remember to send at least one gift subscription for TODAY'S HEALTH at Christmas time. Have subscription blanks on the receptionist's desk in your husband's office. Insist that TODAY'S HEALTH be on the reception room table in his office.

Do you want to help someone to see? Send your discarded eyeglasses, jewelry and scrap gold to New Eyes for the Needy, Inc., Short Hills, New Jersey. It is a charitable, non-profit organization.

Plans are being formulated to make your annual meeting one of fun and information. Send us your suggestions.

We have $3,500 plus out on loan to girls who are seeking professional careers in nursing. Mrs. E. A. Larsen will send out an information sheet about the girls who are receiving loans. She requests pictures and accounts of the activities of your Future Nurses Clubs in order that she may publish them in a news bulletin. We need money for the Loan Fund. Send more than fifty cents if you can. We are planning a benefit dance for the benefit of the Loan Fund, to take place during the state meeting. Attend, have fun and, at the same time, help some girl to realize her ambitions.

We ask your suport for the GEMS program. And we urge that every doctor's car be equipped with safe-driving belts. We should set an example!

Send your newspaper clippings and pictures to Mrs. Homer Wichern. She is doing a splendid job with our scrapbook, but she would like more material from counties.

Remember that if you are a good doctor's wife, you are his best public relations contact with the public. Misunderstandings on the part of the community are the result of misinformation or lack of information. We of the Woman's Auxiliary are in position to carry the story of Medicine to the people in a way that is not open to the medical profession itself. The volunteer services of the doctor's wife are of great value in creating good will for individual doctors and for the medical societies.

MRS. CHARLES H. FLYNN
President

A LIVING MEMORIAL

What better way to honor the memory of a beloved doctor or a member of a doctor's family than a gift to his university through the American Medical Education Foundation? The sum, large or small, will be used to assist in the education of fine young medical students, and it also will help keep our medical schools free from government control.

Memorial cards should be in the hands of the county president and secretary for imediate mailing to the bereaved family. The gift check is then mailed to the chairman of the state AMEF Committee, Mrs. H. A. Spilman, 1231 Castle Street, Ottumwa.

OMISSION

We regret that Clay County was inadvertently omitted from the list of Iowa counties that went over the top in subscriptions to TODAY'S HEALTH. We hasten to correct that omission and report that Clay County tied with Cass for fifth place, with a percentage of 275.

PAGE COUNTY

Members of the Page County Auxiliary were hostesses to the doctors' wives attending the Fall Clinical Conference of the Eleventh District, in Clarinda on September 14. Coffee and cookies were served to the registrants by Mrs. Frederick Sperry and Mrs. Charles Flynn. In the afternoon, color slides of the Holy Land were shown by Mr. and Mrs. W. G. Dunn, of Clarinda, and a social evening followed.

WAPELLO COUNTY

The Woman's Auxiliary to the Wapello County Medical Society met at 7:30 p.m. on October 4 at the home of Mrs. Robert Meyers. Dessert and coffee preceded the business meeting, served by two members of the October Hostess Committee, Mrs. Sidney Brody and Mrs. Kenneth Lister.

The Auxiliary presented a camera to Miss Shirley McGhee when she graduated with her class at

St. Joseph's Hospital, Ottumwa. Miss McGhee's training was sponsored by the Auxiliary.

The Future Nurses Club of the Ottumwa High School held a Benefit Dance on September 30 and cleared approximately $130. The Club plans a trip to Iowa City for the near future and the Medical Auxiliary has contributed $17 for that project.

POLK COUNTY

The Polk County Medical Society and its Auxiliary held their annual fall dinner dance on September 17 at the Hotel Fort Des Moines. The party began with a social hour at 6:30. It was a delightful get-together for all.

MAHASKA COUNTY

The Woman's Auxiliary to the Mahaska County Medical Society met on September 21 at the Helen Perkins Tea Room. Mrs. G. S. Atkinson, the president, presided and led a discussion of the questionnaire which had been sent to the Auxiliaries by Mrs. Flynn. She complimented the hospital nurses and clerical staff on their splendid assistance in the administration of poliomyelitis vaccine on September 9.

A collection of toys and games for the Oskaloosa School for Handicapped Children was suggested as a Christmas project.

Mrs. Leroy Catterson was appointed Auxiliary representative to plan a candlelight service for Future Nurses. And Mrs. Sidney Smith urged each member to be responsible for at least five subscriptions to TODAY'S HEALTH.

BLACK HAWK COUNTY

About 60 women attended the first Black Hawk County Auxiliary meeting of the season, a dinner and style show at the Sunnyside Country Club, Waterloo. Mrs. R. F. Nielsen, Mrs. George Bairnson and Mrs. George Hearst, all of Cedar Falls, were in charge of decorations and arrangements. Mrs. W. M. Spear, of Oakdale, was a special guest.

Mrs. Hearst announced plans for beginning an AMEF fund at the local level, and Mrs. J. F. Gerken, of Waterloo, reported on the recent state board meeting in Des Moines.

DUBUQUE COUNTY

Wednesday, September 21, marked the opening of the annual three-day Handicapped sale sponsored by the Dubuque County Medical Auxiliary. The co-chairmen were Mrs. Joseph Straub, Mrs. Edward Bartels and Mrs. Mansfield Lagen.



NEWS AND VIEWS

Thank you, Mrs. Jules Myron Davidson, president of the Woman's Auxiliary to the Louisiana State Medical Society, for your gracious note of commendation and appreciation for the AUXILIARY NEWS. Notes like yours are the editor's reward.

Despite all of the political promises, all of the work and all of the talk, the socialization of medicine moves steadily ahead—a piece of legislation this session, a piece next session. Soon, all the pieces will fit into a jigsaw pattern of bureaucratic control by politicians.

These politicians are not the regular ones who must go to the people with the record of their accomplishments in their hands to ask for approval via reelection. Rather, they are moles, undermining our government year in and year out, regardless of what political party is nominally in power. They are protected by Civil Service, and cannot be fired for any of the usual reasons. In any attempt at so doing, the burden of proof is on the department head who initiates the action.

It is these people who write the socialistic bills and dupe congressmen into sponsoring and supporting them. They have their own propaganda mills, and they use tax money in printing and disseminating their arguments.

A case in point is the "disability freeze" amendment to Title 11 of the Social Security Act, which Congress adopted last year. This tricky legislation was not intelligible to the average person, but in effect it tied the disabled into the Old Age and Survivors "insurance" program.

That was last year. Now we come to the second step, which is being pressed at this moment: to provide *cash benefits* to the "permanently disabled," beginning at age 50. Other proposals will follow—and so Congress will be pushed along, inch by inch, toward the ultimate goal of compulsory health insurance, presided over by bureaucrats!

The Board of Trustees of the AMA has issued a special message to the profession (J.A.M.A., 158:1032, (July 23) 1955). Dr. Ernest B. Howard, assistant secretary of the AMA urges every member of the Auxiliary to read it. "No message in many years," he declares, "has been of such import to Medicine."

COUNTY SOCIETIES

Black Hawk

At the September 20 meeting of the Black Hawk County Medical Society, held at the Elks Club in Waterloo, Dr. William Spear, of Oakdale, spoke on "The Diagnosis of Pulmonary Lesions." At the meeting on October 18, Dr. Arnold Jackson, of Madison, Wisconsin, discussed "Gastrointestinal Hemorrhage."

Des Moines

The county's mental health clinic was the topic for discussion at the monthly dinner meeting of the Des Moines County Medical Society held on October 11 at the Burlington Golf Club.

Dubuque

At the November 8 meeting of the Dubuque County Medical Society, to be held at the Dubuque Golf & Country Club, Dr. L. A. Buie will speak on "Office Proctology."

Hamilton

Dr. and Mrs. Forrest F. Hall were honor guests at a dinner party attended by members of the Hamilton County Medical Society and its Auxiliary on September 12, at the home of Dr. and Mrs. J. L. Ptacek. Dr. and Mrs. Hall have since moved to Clearwater, Florida. A brief business meeting followed the dinner.

Johnson

The November 2 meeting of the Johnson County Medical Society will be held at the Oakdale State Sanitorium, and the speaker will be Dr. A. A. Pleyte, medical director of the Wisconsin Antituberculosis Association, Milwaukee. Dr. Pleyte will speak on "Findings Revealed by Routine Admission Hospital X-ray Films."

Linn

Dr. A. E. Braley, head of the Department of Ophthalmology at SUI, will speak at the November 10 meeting of the Linn County Medical Society on "The Red Eye."

Polk

At the November 16 meeting of the Polk County Medical Society, at the Savery Hotel in Des Moines, Dr. David B. Radner, of Chicago, will speak on "The Care and Rehabilitation of the Pulmonary Emphysemic Patient."

Scott

Dr. Claude R. Hitchcock, of the Department of Surgery at the University of Minnesota, is to be the guest speaker at the November 1 meeting of the Scott County Medical Society, and his topic will be "The Value of Detecting Cancer in the Asymptomatic Phase of the Disease." At the meeting to be held on December 6, Dr. Ben W. Lichtenstein, clinical professor of neurology at the University of Illinois, will speak on "Cerebrovascular Disease: Clinical and Pathologic Aspects."

Wapello

At the November 1 meeting of the Wapello County Medical Society, Dr. I. V. Ponseti, of the SUI Department of Orthopedics, will speak on "Perthe's Disease and Aseptic Necrosis." The December 6 program is to consist of a symposium on hypertension presented on sound film by Wyeth Laboratories.

Woodbury

A joint meeting of the Bar Association and the Medical Society of Woodbury County will be held at the Mayfair Hotel, Sioux City, on November 3. Cocktails and dinner will precede the program. The medical witness will be the subject of discussion, and Judge Ralph Crary will be moderator.

The speaker at the Woodbury County Medical Society's regular meeting, November 20, will be Dr. Murray Franklin, of Skokie, Illinois, who was once a faculty member at the SUI College of Medicine.

CIVIL DEFENSE CONFERENCE

The Sixth Conference on Civil Defense of the County Medical Societies Civil Defense Organization will be held at the Sherman Hotel, in Chicago, on Saturday and Sunday, November 12 and 13. The meeting is sponsored by the AMA Council on National Defense.

METAMUCIL® IN CONSTIPATION



Normal Colon



Ulcerative Colitis



Atonic Colon

Smoothage in Correction of Colon Stasis

To initiate the normal defecation reflex, the "smoothage" and bulk of Metamucil provide the needed gentle rectal distention.

Once the habit of constipation has been established, due to any of a large number of causes, it becomes a major problem. Self-medication with irritant or chemical laxatives, or repeated enemas, usually causes a decreased, sluggish defecation reflex and may result in its complete loss.

Rectal distention is a vital factor in initiating the normal defecation reflex, and sufficient bulk is thus of obvious importance in restoring this reflex. Metamucil provides this bulk in the form of a smooth, nonirritating, soft, hydrophilic colloid which gently distends the rectum and initiates the desire to evacuate. Metamucil demands extra fluid, imparting even greater smoothage to the intestinal contents.

It is indicated in chronic constipation of various types—including distal colon stasis of the "irritable colon" syndrome, the atonic colon following abdominal operations, repressions of defecation after anorectal surgery and in special conditions such as the management of a permanent ileostomy. Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE

WE CORDIALLY INVITE YOUR INQUIRY for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your eligible dependents.



SINCE 1902

ALL PREMIUMS COME FROM

PHYSICIANS SURGEONS DENTISTS

ALL BENEFITS GO TO

$4,500,000 ASSETS
$22,500,000 PAID FOR BENEFITS

PHYSICIANS CASUALTY AND HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

The Month in Washington

Washington, D. C.—Within a few months there will be under way the first comprehensive survey ever to be made of the nation's mental health problems. The study will attempt to measure the extent of mental illness, to judge the progress and lack of progress in research, and to estimate the additional hospitals and clinics and trained personnel needed before a start can be made toward a solution.

A newly-formed Joint Commission on Mental Illness and Health already has begun preliminary work on the survey. The all-out effort will be initiated—possibly before the first of the year—after the Commission has received the formal approval of the National Mental Health Advisory Council of U. S. Public Health Service and the Surgeon General. Once this endorsement has been given, $250,000 in U. S. funds will be available to help with the first year's operations. Another million dollars is to be supplied over the following two years.

Originally, the Joint Commission was formed by the American Medical Association's Council on Mental Health and the American Psychiatric Association. Later other associations joined in, including the American Association of Psychiatric Social Workers, the American Hospital Association, the American Nurses Association, the National League of Nursing, the American Psychological Association and the National Education Association.

A nationwide survey has been the objective of these associations for more than a year. Substance was added to the idea this year when Congress approved the $1,250,000 fund, to be used over three years, for a comprehensive study. The law specifies that the investigation be conducted by nongovernmental bodies; to qualify fully, the Joint Commission has been legally incorporated.

At hearings before Congressional committees early this year psychiatrists and others outlined the complex problem they are facing.

The care of mental patients is one of the great financial burdens of the states; rate of cure and rehabilitation is so low that institutions are being filled as fast as they can be constructed; half the hospital beds are occupied by mental patients and their care costs more than a billion dollars a year in tax funds.

There are not enough psychiatrists trained to administer state programs or even all the large hospitals; competition for the top men in this field has been compared to the proselyting of football players and coaches.

Many of the leading psychiatrists complain that too much attention is being paid to constructing hospitals and not enough to research, which might

develop treatments that would keep many patients out of institutions, and bring about the rehabilitation of hundreds of thousands of others now hospitalized.

In testifying before a House committee early this year, Dr. Leo H. Bartemeier, representing the AMA, argued for federal help in conducting the survey. He told the Committee: "For several years we in the profession of psychiatry have been aware of the critical need for a survey and evaluation of our facilities and programs for the diagnosis, treatment and care of the mentally ill and retarded. While the problems of mental illness appear to grow in almost geometric proportion, we find ourselves without a comprehensive, up-to-date, integrated body of knowledge in spite of the fact that many worthwhile surveys and studies in this field have been made. It is only with such complete knowledge that our present and future direction and programs can be properly planned."

NOTES

Before it prepares a report on the narcotic problem, the Senate subcommittee will have held hearings in most parts of the country. Many local addiction problems have been described. At the New York hearing, the subcommittee was urged to recommend a system of clinics, where the addict could obtain narcotics legally and at reasonable cost, thereby defeating the rackets.

Although states may take either U. S. grants to buy Salk vaccine or the vaccine itself, most of them are taking the money.

Veterans Administration has set up a seventh area medical office in Columbus, Ohio, a move that it believes eventually will provide better service at less cost.

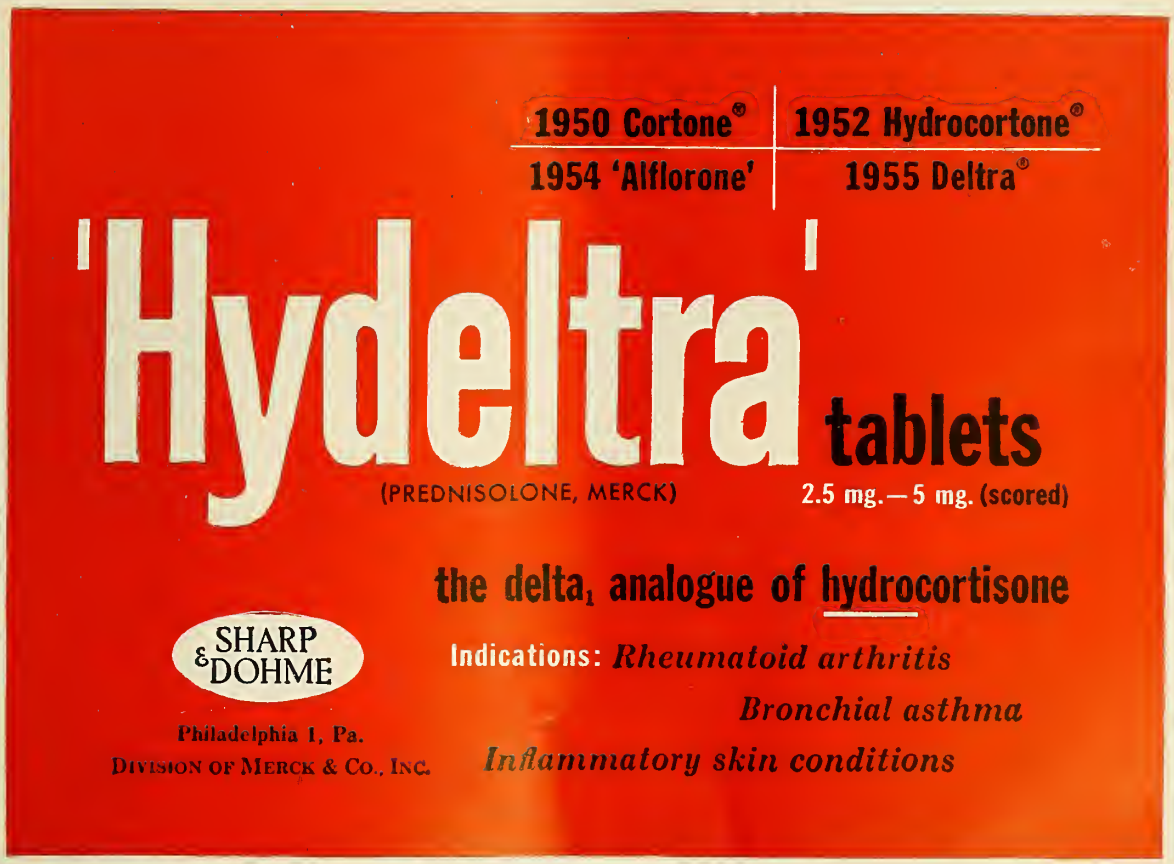
Almost nine million dollars will be spent next year on health work in North, South and Central America by international bodies such as World Health Organization. One project is the starting in Mexico of a four-year malaria eradication program.

The Navy has set up a program for training Waves as nurses. They will be obligated for a year's active duty for each year of training.

Bureau of Internal Revenue has summarized deductible and non-deductible medical expenses for income tax purposes; the listings combine new interpretations with a clarification of old rulings.

SUI HEMATOLOGY COURSE CANCELLED

The postgraduate short course in hematology which the College of Medicine at SUI had scheduled for November 17, 1955, has been cancelled.



Coming Meetings

(Continued from page 576)

Dec. 1-3	**Gastroenterology for General Physicians.** U. of Minn. Center for Continuation Study, Minneapolis
Dec. 1-3	**Postgraduate Urology** (North Central Section, Amer. Urol. Assn.) Mayo Clinic, Rochester
Dec. 1-21	**Pain Syndromes: Diagnosis & Treatment by Regional Block.** U. of Penna., Philadelphia
Dec. 5-7	**Surgery of Trauma.** Southwestern Med. School of U. of Texas, Dallas
Dec. 5-7	**Infertility.** New York University, NYC
Dec. 5-7	**Ophthalmological Conference.** U. of California, San Francisco
Dec. 5-7	**Diagnosis & Treatment of Poisonings.** New York University, NYC
Dec. 5-10	**Postgraduate Course in Diseases of the Chest.** Am. Coll. Phys., Ambassador Hotel, Los Angeles
Dec. 5-9	**Pediatric Cardiology.** New York University, NYC
Dec. 5-9	**Advanced Electrocardiography; Complex Arrythmias.** Michael Reese Hospital, Chicago.
Dec. 5-10	**Heart and Great Vessels in 1955.** Massachusetts General Hospital, Boston
Dec. 5-10	**Diagnosis and Treatment of Trauma.** New York University, NYC
Dec. 5-14	**Medical Care of Atomic Casualties.** Walter Reed Army Medical Center, Washington, D. C.
Dec. 7-9	**Refresher Course for General Practitioners.** Vancouver General Hospital, Vancouver, B. C.
Dec. 8	**Pediatric Clinical Seminar.** Albany Medical College, Albany
Dec. 12-16	**Vaginal Approach to Pelvic Surgery.** Cook County Graduate School of Medicine, Chicago
Dec. 19-23	**Clinical Bronchoscopy.** Cook County Graduate School of Medicine, Chicago

PEDIATRICS SERIES TO BE TELEVISED

The AMA is cooperating in a series of television programs on pediatric subjects that began on October 16 and is being paid for by Libby, McNeil and Libby, a manufacturer of baby food, among other things. Dr. W. W. Bauer, director of the Association's Bureau of Health Education, participates as medical narrator.

Unlike the live network television programs in which the AMA cooperates, "Time for Baby" will be distributed as film and will be shown by various stations at times more or less suiting their convenience. At latest report, installments were to be exhibited twice a week in New York, Chicago, Pittsburgh, Milwaukee, St. Louis, Minneapolis-St. Paul, Nashville and Miami. Viewers in Kansas City, Mobile, El Paso, Houston, Norfolk, San Antonio, Seattle, Tampa-St. Petersburg and Louisville could see one a week, and it is expected that other cities will be added to the list.

MEDICAL TECHNOLOGISTS' COURSE

A continuation course in bacteriology and blood bank technics for medical technologists will be held at the University of Minnesota's Center for Continuation Study, on the Minneapolis campus, from November 14 to 16.



St. Joseph Sanitarium

Supervision Sisters of Mercy

P. O. Box 236
DUBUQUE, IOWA
or phone 3-8291 for information

Mild Mental and Nervous Cases
also
Convalescent and Rest Patients
Shock Therapy Hydrotherapy
Occupational Therapy
COMPETENT STAFF

PICKER X-RAY CORPORATION
of Iowa

Picker x-ray OF IOWA

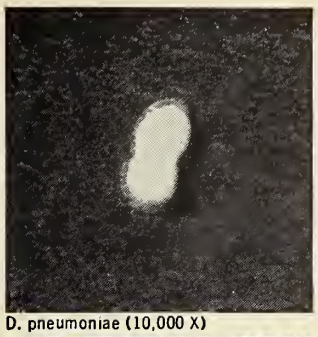
DAVENPORT DES MOINES
SIOUX CITY WATERLOO
OMAHA

An Iowa Corporation
To Serve the Profession of Iowa
J. K. DUNN, *Vice President*

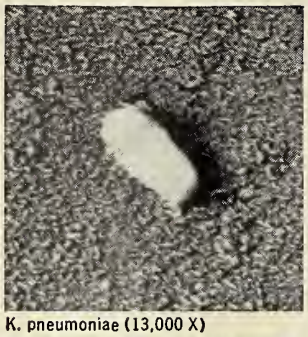
SALES
SERVICE
SUPPLIES
X-RAY
AND
ELECTROMEDICAL
EQUIPMENT

The organisms commonly involved in

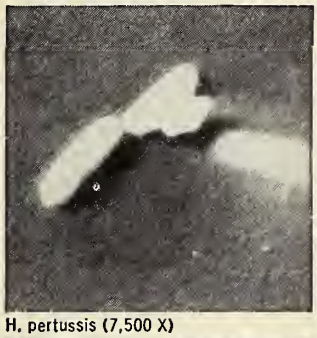
Bronchopneumonia



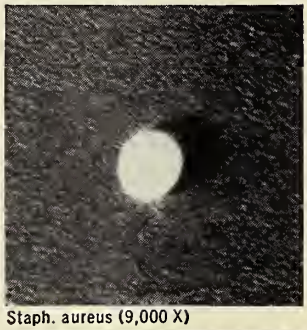
D. pneumoniae (10,000 X)



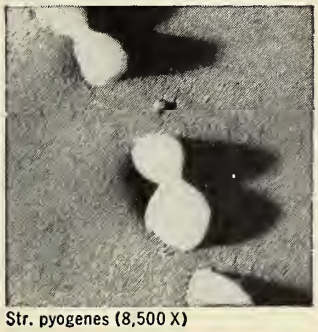
K. pneumoniae (13,000 X)



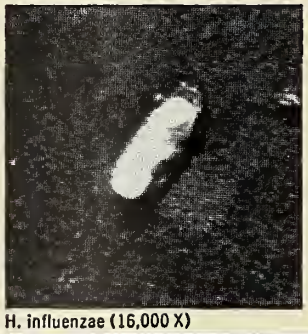
H. pertussis (7,500 X)



Staph. aureus (9,000 X)



Str. pyogenes (8,500 X)



H. influenzae (16,000 X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN*

HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF. — THE UPJOHN BRAND OF TETRACYCLINE

HOME CARE FOR T-B PATIENTS

Concerned over the prevalence of the notion, among doctors little less than among laymen, that tuberculosis is no longer a serious disease, the Ohio Trudeau Society has published "Ten Principles for the Physician" to serve as a philosophy of tuberculosis control.*

The Society insists that some period of hospitalization is still mandatory (1) as a public health measure, (2) as a means of providing close supervision of the patient and of making sure that he is provided rest, proper drugs, and surgery, when necessary, and (3) for the opportunity it provides of educating the patient regarding tuberculosis and its treatment. "The development of antituberculosis drugs," the Society insists, "does not mean that we have found a panacea whereby a patient can take some medicine and get well. Drug therapy is only part of an overall complex therapeutic regimen and much of this necessary treatment can be accomplished poorly, or not at all, in the home."

The proper length of hospital care seems to be a crucial issue. But it is felt, the Society says, that the minimum hospitalization should be three months.

"The private physician," the statement continues, "must subordinate his professional services to that of the health officer in matters pertaining to the control of the individual patient, preventing the spread of his disease to the immediate family and members of the community. . . . Essentially the same relationship should exist between the tuberculosis hospital and the local health agency."

The Ohio Trudeau Society's *Ten Principles for the Physician* are as follows:

I. To maintain a high index of suspicion of tuberculosis in considering diagnostic problems.

II. To utilize freely the familiar and simple diagnostic tools of bacteriological examination, chest x-ray examination, and tuberculin testing.

III. To cooperate with the public health department in a combined attack on this disease.

IV. To treat the whole patient, being conscious of his emotional and economic needs, as well as his professional care.

V. To forsake expediency and be honest with the patient, expressing neither over-optimism nor pessimism.

VI. To educate the patient and his family in the basic facts of this disease and its treatment, recognizing that only an informed patient will cooperate in long-term care.

VII. To recognize that the early treatment of the active case is best cared for in the tuberculosis hospital because:

(1) It protects the family from infection.

(2) It provides supervised rest and establishes an effective and tolerated drug regimen.

(3) It obtains the patient's understanding of his disease and its treatment.

VIII. To prescribe antituberculosis drugs in accord with the best knowledge of the day, taking account of:

(1) The effectiveness of the regimen, both as regards the component drugs and the duration of therapy.

(2) The long-term problem of bacterial resistance.

IX. To join in a mutual venture with the sanatorium to develop an effective rehabilitation plan for the convalescent patient.

X. To cooperate with sanatorium and public health officials in providing long-term supervision of the patient with inactive disease, insisting on periodic x-ray examinations and urging the patient to maintain a safe mode of life.

* Hospital Versus Home in Tuberculosis Care: A Statement of the Ohio Trudeau Society, OHIO M.J., 51:999-1000, (Oct.) 1955.

DECREASE FOUND IN T-B HOSPITALIZATION

A survey conducted by the National Tuberculosis Association and the Division of Special Health Services of U.S.P.H.S. has revealed an overall decrease of 6.7 per cent between April and November, 1954, in the number of tuberculosis patients occupying beds in all types of hospitals throughout the country.* The average decrease in the number of such patients occupying beds in federal hospitals declined 4.3 per cent, but in the V-A institutions (having 82 per cent of the federal T-B beds) the decrease was only 2.6 per cent.

The decrease in occupancy was greater, on the average, in non-federal hospitals, and was especially great in the smaller ones of those. As regards Iowa, the tabulations show that reports were secured from 5 non-federal hospitals, in which 91.9 per cent of such T-B beds are located. The combined census at those institutions is reported as having fallen from 570 to 491 (13.9 per cent) during the 8 months covered by the study. Only 7 states had proportionally greater decreases.

The investigators point out that their figures don't necessarily reflect a decreased need for T-B hospital facilities. For one thing, there are seasonal fluctuations in new-case incidence. Second, for perhaps obscure reasons, hospitals sometimes have waiting lists even when they lack 10 or 15 per cent of being fully occupied. And third, *need* and *demand* for T-B hospitalization are by no means necessarily the same thing. They called attention in particular to the study of Polk County, Iowa, T-B cases reported in last month's JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, in which Drs. A. Gelperin and L. J. Galinsky found that no fewer than 60 per cent of new cases discovered during 1952 and 1953 came to diagnosis only because the patients "felt ill."

* Glaser, S., Johnston, J., and Trauger, D. A.: Change in tuberculosis bed occupancy, Spring, 1954-Fall, 1954. Public Health Reports, 70:858-868, (Sept.) 1955.

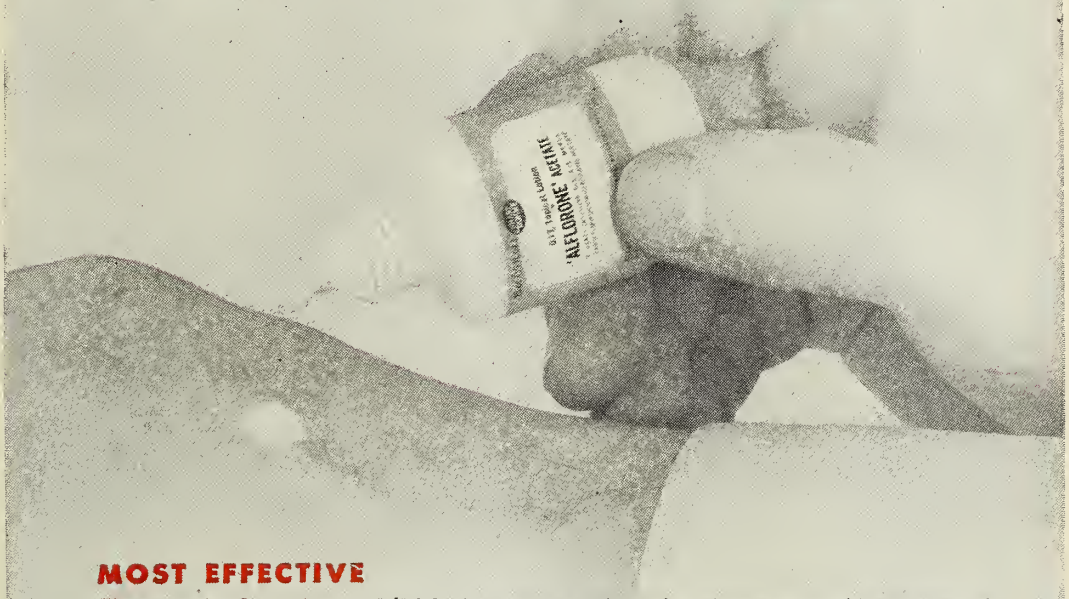
WEIGHT FOR WEIGHT,
THE MOST ACTIVE ANTI-INFLAMMATORY
AGENT YET DEVELOPED
FOR TOPICAL USE

TOPICAL LOTION

'ALFLORONE'

ACETATE

(FLUDROCORTISONE ACETATE, MERCK) 9 ALPHA-FLUOROHYDROCORTISONE ACETATE



MOST EFFECTIVE
Therapeutically active in 1/10th the concentration of hydrocortisone (Compound F).

MOST ECONOMICAL
Superior spreading qualities—a small quantity covers a wide area.

MOST ACCEPTABLE
Most patients prefer the cosmetic advantages of this easy-to-apply, smooth spreading lotion.

Supplied: Topical Lotion Alflorone Acetate: 0.1% and 0.25%, in 15-cc. plastic squeeze bottles. Topical Ointment Alflorone Acetate: 0.1% and 0.25%, 5-Gm., 15-Gm., and 30-Gm. tubes.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
223 Locust Street Telephone 2-6766
Des Moines 9, Iowa

The Neurological Hospital

2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For unmarried girls

Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.

Rates reasonable. In certain cases work given to reduce expenses.

Write for information

MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

PERSONALS

Dr. Louis R. Greco, a diplomate of the American Board of Surgery, has opened a practice at Boone. A graduate of the medical school at the University of Illinois, he received his specialty training at Augustana Hospital, Chicago, and served as surgeon in Veterans Administration hospitals for a number of years. He was at the installation in Des Moines from 1951 until 1953.

After practicing for about nine years in Akron, **Dr. Ralph E. Brundige** has moved to Denver, Colorado.

Dr. Philip A. McLaughlin has decided to locate in Iowa Falls, pending possible residency training next July. He is associated there with **Dr. A. W. Burgess.**

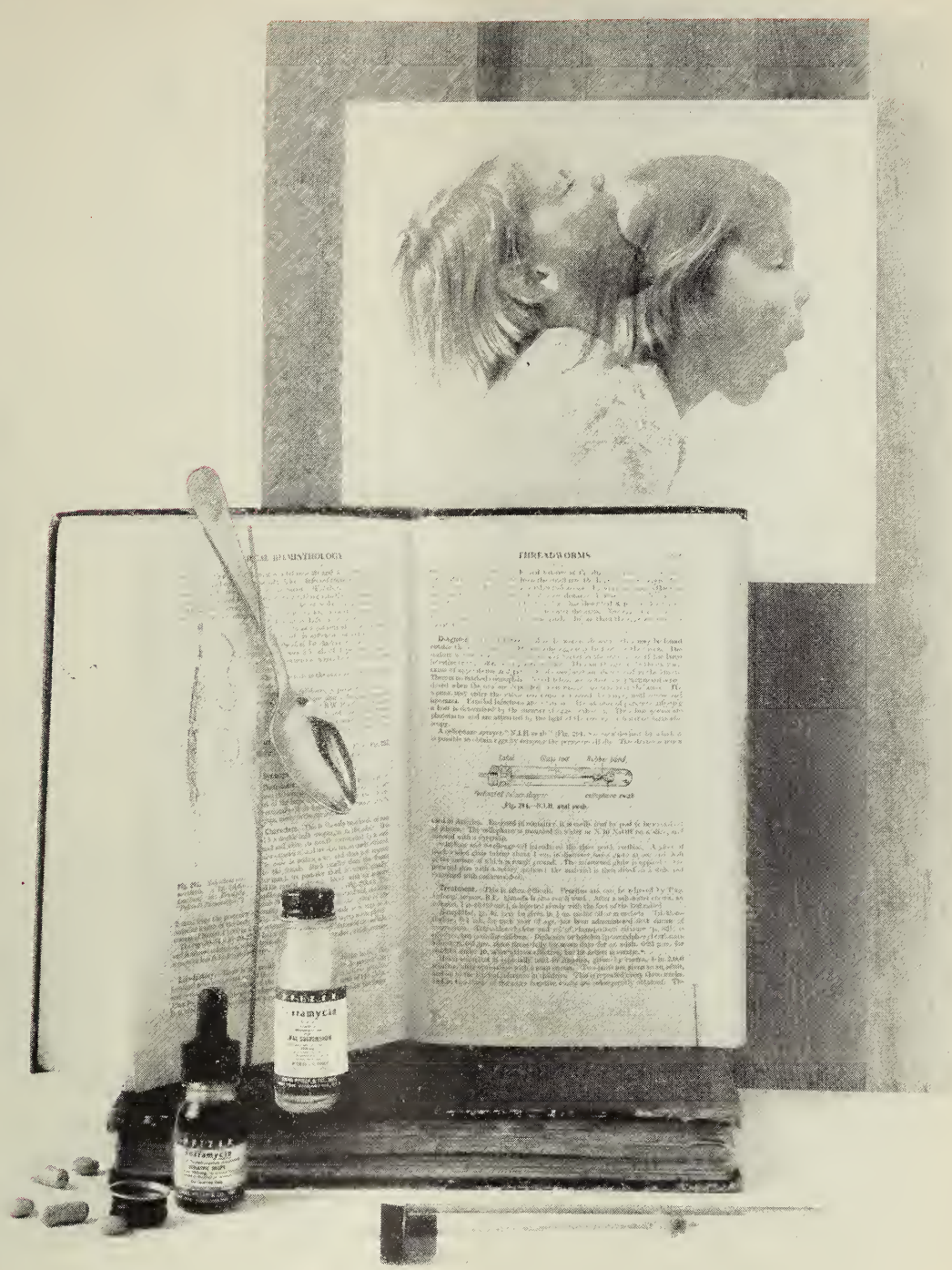
Dr. William M. Sproul, of Des Moines, succeeded **Dr. Frank D. McCarthy,** of Sioux City, as president of the Iowa Academy of General Practice on September 16. In elections held during the Academy's annual meeting which closed on that day, **Dr. C. A. Nichol,** of Panora, was chosen president-elect, **Dr. R. L. Knipfer,** of Jesup, vice-president, and **Dr. D. H. Kast,** of Des Moines, secretary-treasurer.

Dr. J. H. Coddington, of Humboldt, was named to a three-year term on the board of directors, and **Dr. H. W. Mathiasen,** of Council Bluffs, was elected to fill an unexpired two-year term. **Dr. J. G. Fellows,** of Ames, was named as delegate to the AAGP.

"Doctors, hospitals and communities as a whole should be catastrophe minded," **Dr. Carroll B. Larson,** chief of the orthopedic surgery faculty at SUI, told the doctors who attended the SUI postgraduate short course in trauma and fractures September 16. He reminded them that tornadoes, explosions, fires and, in some areas, floods may suddenly injure hundreds of persons almost simultaneously.

To illustrate the importance of adequate preparations for disaster, Dr. Larson recounted his experiences as a member of the staff at Massachusetts General Hospital, Boston, in 1942 when the Cocoanut Grove fire occurred. Prior to the fire, he said, the hospital had organized its entire personnel for the handling of just such emergencies, and had conducted mobilization drills regularly. In consequence, during the first three and a half hours after the fire broke out, all 39 of the people who

From virus to vermicularis

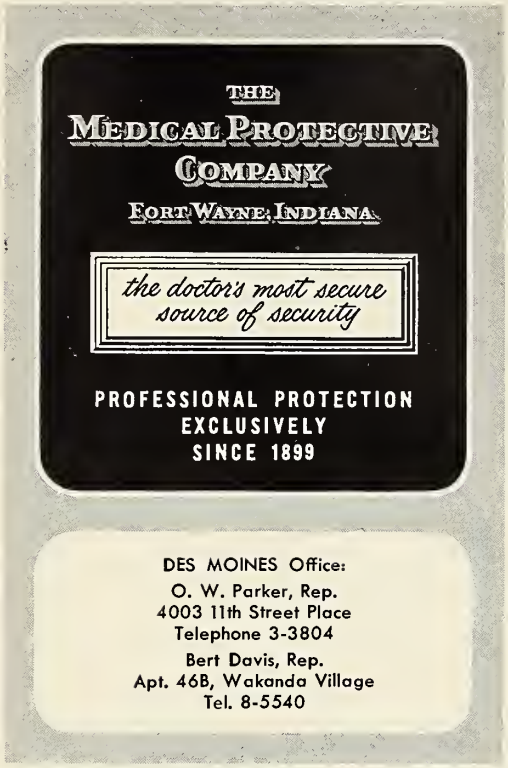


Terramycin®* has proved effective against an amazing variety of pathogens—ranging from sub-microscopic viruses to large helminthic parasites; findings supported by scientific reports by thousands of physicians on millions of cases. ■ Supplied in convenient and palatable oral dosage forms as well as rapidly effective parenteral, topical and ophthalmic preparations.

*BRAND OF OXYTETRACYCLINE

PFIZER LABORATORIES, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

Pfizer



Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

Starting Dates—Winter, 1955-1956

SURGERY—Surgical Technic, Two Weeks, November 28, January 23
Surgical Anatomy & Clinical Surgery, Two Weeks, March 5
Surgery of Colon & Rectum, One Week, November 28, February 27
General Surgery, One Week, February 13; Two Weeks, April 23
Basic Principles in General Surgery, Two Weeks, April 9
Gallbladder Surgery, Ten Hours, April 9
Fractures & Traumatic Surgery, Two Weeks, March 12
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, November 28, February 13
Vaginal Approach to Pelvic Surgery, One Week, December 12, February 6
OBSTETRICS—General & Surgical Obstetrics, Two Weeks, February 27
MEDICINE—Internal Medicine, Two Weeks, May 7
Electrocardiography & Heart Disease, Two-Week Basic Course, March 12
Gastroscopy, Forty-Hour Basic Course, March 19
Dermatology, Two Weeks, May 7
RADIOLOGY—Diagnostic X-Ray, Two Weeks, January 9
Clinical Use of Radioactive Iodine, One Week, April 2
Clinical Uses of Radioisotopes, Two Weeks, May 7
PEDIATRICS—Intensive Review Course, Two Weeks, April 9
UROLOGY—Two-Week Course, April 16
Cystoscopy, Ten Days by appointment

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

had not died in the burning building, on the way to the hospital, or immediately after their arrival there, had been assembled in beds, treated for their burns insofar as their shock and asphyxia permitted, and, if necessary, given oxygen.

Dr. Abraham Gelperin, director of the Des Moines-Polk County Health Department, has done some speculating on men's failure to live as long as women. "Women respond more to public health education and information, and go to the doctor earlier and oftener than men," he has concluded. Men, he goes on to say, "have to be dragged into a doctor's office by their heels," and he counsels their wives to consider that dragging as one of their major responsibilities.

At the annual scientific assembly of the Nebraska Academy of General Practice on September 15, **Dr. L. E. January**, professor of internal medicine, **Dr. J. H. Randall**, head of the Department of Obstetrics, **Dr. R. G. Bunge**, professor of radiology, and **Dr. G. R. Barnes, Jr.**, assistant professor of pediatrics, all of SUI, were speakers.

Drs. H. J. Smith, A. G. Lueck, C. H. Gutenkauf and **D. A. Glomset**, of Des Moines, have established Internal Medical Building, Inc., to construct a business block at 2932 Ingersoll Avenue. In addition to providing offices and a laboratory for them, the new structure will house a pharmacy.

Dr. Frank C. Coleman, a Des Moines pathologist who is chairman of the board of the Polk County Blood Donor Service, announced early in September that Mercy Hospital, Des Moines, had joined a regional clearing house system through which blood can be supplied in emergencies anywhere within an 11-state region centering in Chicago. Three of the other principal hospitals in the city, Broadlawns, Iowa Methodist and Iowa Lutheran, he said, were expected to join within two or three weeks.

Under the new system, persons who draw blood from an out-of-town bank can repay it through a donation to one of the local ones.

The Polk County Medical Society recently became a co-sponsor of the Polk County Blood Donor Service. Previously, the local hospital council had been in sole charge. Dr. Coleman said that it is hoped that the new arrangement will result, among other things, in lengthening the lists of donors. In 1954, the Polk County Service supplied 2,296 pints, or 70 per cent of the amount used in Des Moines.

On September 15, **Dr. Vera V. French** began the practice of internal and psychosomatic medicine at Davenport. A 1953 graduate of the College of Physicians and Surgeons at Columbia University,

Dr. French holds a Ph.D. in psychology from Radcliffe College, and from 1944 until 1949 was a professor of that subject at Swarthmore. She interned and received her residency training at University Hospitals, Iowa City.

A physicians and surgeons' emergency call service began operation in Keokuk on September 12.

Dr. Ada Dunner, of Des Moines, returned recently from Europe, where she attended the nineteenth International Psychoanalytical Congress in Geneva and visited hospitals and medical centers elsewhere in Switzerland and in Germany.

Dr. L. J. Peck, of Wellsburg, underwent an appendectomy at the Grundy County Memorial Hospital on Labor Day, and **Dr. W. K. Kienzle,** of the same town, was operated upon there at about the same time.

Dr. Robert Sherman, a graduate of the College of Medicine at SUI who interned at the Fresno County Hospital, in California, opened a practice at Ackley on September 26.

Mr. Louis Blair, administrator of St. Luke's Hospital at Cedar Rapids, has had a bit more success than he sought in finding a place for a refugee physician, **Dr. Elmer Thrombly,** a Hungarian. He had assured the Immigration Service that Dr. Thrombly could have a year's appointment at St. Luke's, but when the red tape became snarled, the Cedar Rapids post had otherwise to be filled, he wrote to the Mental Health Institute at Independence and to Mercy Hospital, Des Moines, and found that *both* of them would be glad to hire the foreign physician.

Drs. E. A. Braley and **P. J. Leinfelder,** of the Department of Ophthalmology at SUI, have been attending meetings of undertakers throughout the state, instructing them in the proper method of removing eyes that have been bequeathed to the University. Twenty vacuum containers and sterile operating kits have been distributed, and the Lions clubs have arranged to have state highway patrolmen deliver them promptly to Iowa City whenever eyes are available for shipment. Undertakers, rather than physicians, have been chosen to remove the eyes because in most instances they are more likely to be readily available.

On September 26, **Dr. C. E. Swanger** opened an office in Eldon. He previously had practiced at Oskaloosa.

Dr. C. E. Knouf, a lieutenant commander in the Marines, was separated from the corps on October

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

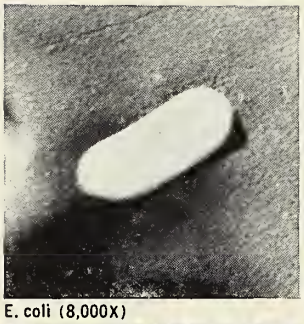
Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

The organisms commonly involved in

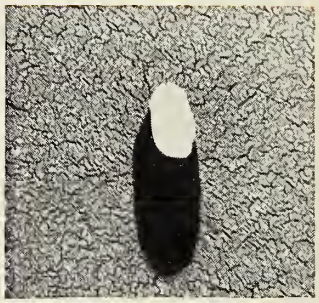
Pyelitis



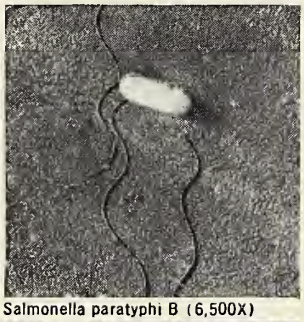
E. coli (8,000X)



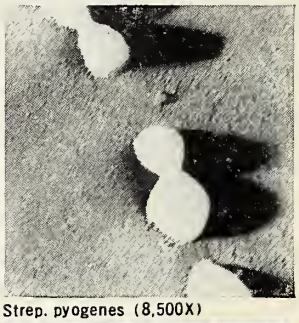
Aerobacter aerogenes (12,500X)



Salmonella paratyphi A (8,000X)



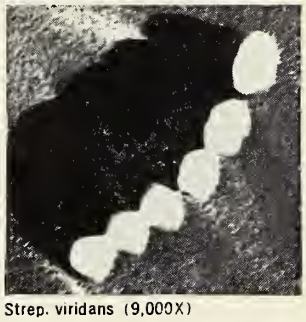
Salmonella paratyphi B (6,500X)



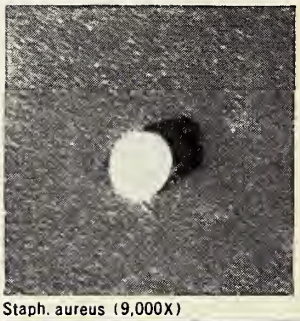
Strep. pyogenes (8,500X)



Strep. faecalis (10,000X)



Strep. viridans (9,000X)



Staph. aureus (9,000X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN*

HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF TETRACYCLINE

18, and will shortly resume his practice in Lake City. Throughout his term of service, he has been stationed at Portland, Oregon.

Dr. E. F. Kohrs, a surgeon who has practiced with **Dr. W. G. Bessmer** for the past year, has opened a separate office in Davenport.

Dr. Richard K. Saskill, a 1951 graduate of the Temple University School of Medicine who did postgraduate work at Harper Hospital, Detroit, and at SUI, has joined **Dr. Sidney Brody** in the general practice of medicine and surgery at Ottumwa.

Dr. J. Lawrence Cochran, of Carroll, was made a fellow of the Academy of Psychosomatic Medicine in New York on October 7, and has received notification of his election to membership in the British Society of Medical Hypnotists, the sixth American physician to be so honored. He says he became convinced of the utility of hypnotic technics after using them experimentally on his daughter, who had "night terrors" following a nearly fatal encounter with an enraged bull.

Dr. E. E. Magee, of Waterloo, was in a two-car collision on September 29 that resulted in $650 worth of damage to his car. Aside from shock, the doctor's principal injury was a possibly fractured thumb.

Three representatives of the medical faculty at SUI were on the program of the American Academy of Pediatrics, in Chicago on October 3 and 4. **Dr. C. B. Larson,** professor and head of orthopedics, was chairman of a panel discussion on his specialty, and **Drs. Charles H. Read** and **Paul E. Baer,** of the Department of Pediatrics, participated in a roundtable on diabetes in children.

Dr. C. E. Chenoweth, who was at Mason City for 34 years and now practices at Anchorage, Alaska, visited his friends in Iowa during September and October. "I enjoy growing up with a new country," he declared.

The metropolitan area of Anchorage has about 60,000 inhabitants, he estimated, and not counting military planes, the daily count of arrivals and departures from its airports is sixth highest in the world. His office is in the 14-story apartment house where he lives; there are 25 or more other doctors in town; and there are three hospitals. "Two or three of my friends fly out and do [medical] work with the natives," he said. Patients are notified by local authorities before the physician flies in. Eight oil companies are now doing exploratory work in the area, he reported, but the search for uranium has virtually ceased.

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 'Hydeltra'

DELTRA® tablets

(Prednisone, Merck)

5 mg. - 2.5 mg. - 1 mg. (scored)

the delta-1 analogue of cortisone

Indications:

Rheumatoid arthritis

Bronchial asthma

Inflammatory skin conditions

SHARP & DOHME

Philadelphia 1, Pa.
Division of Merck & Co., Inc.



for equanimity[1,2]

Equanil*

Meprobamate

(2-methyl-2-*n*-propyl-1,3-propanediol dicarbamate)

Usual dosage: 1 tablet, t.i.d.

Supplied: Tablets, 400 mg., bottles of 48.

1. Selling, L.S.: J.A.M.A. 157:1594 (April 30) 1955.
2. Borrus, J.C.: J.A.M.A. 157:1596 (April 30) 1955.

Wyeth®
Philadelphia, Pa.

new anti-anxiety factor with muscle-relaxing properties

relieves tension

*Trademark

Dr. James W. Culbertson has been promoted from associate professor to professor, **Dr. Bernard I. Lewis** has been promoted from assistant professor to associate professor, **Dr. George H. M. Thornburg** has been promoted from associate to assistant professor, and **Dr. John Eckstein** has been promoted from instructor to associate, all in the Department of Internal Medicine at SUI.

Dr. Iain Maclean Smith has joined the Department of Internal Medicine as an assistant professor. He was previously a member of the staff in pathology and microbiology at the Rockefeller Institute for Medical Research, New York City, and is the recipient of a $12,000 grant from the U.S.P.H.S. for a one-year study of metabolic factors influencing staphylococcal infections in mice.

Another new member of the staff in internal medicine is **Dr. Jack M. Martt,** who comes to the University from the V-A Hospital in Iowa City. He is to be an assistant professor, and his special interest is cardiovascular diseases.

Dr. Robert Hardin, of SUI, addressed a staff conference of the Iowa State Department of Health, September 30, on the topic "Medical Problems in Emergency Medical Service."

At the scientific session of the American Heart Association in New Orleans, October 22-24, **Dr. Bernard I. Lewis,** of SUI, spoke on "Rauwolfia Serpentina in the Treatment of Coronary Artery Disease."

"Plethysymographic Determination of the Volume of Gas Trapped in the Lungs of Patients With Pulmonary Disease" is the title of a paper which **Dr. George N. Bedell,** of the SUI Department of Internal Medicine, will read at the November 4 meeting of the Central Society for Clinical Research, in Chicago.

Drs. William Connor and **Jack Martt,** of SUI, presented a paper "Idiopathic Hyperlipemia and Its Association With Atherosclerosis" at the October 15 regional meeting of the American College of Physicians, in Madison.

Officers of the Iowa Pediatrics Society for this year are **Dr. Arlan F. Harrington,** of Cedar Rapids, president; **Dr. James E. Dyson,** of Des Moines, vice-president; and **Dr. Ralph E. Dyson,** of Des Moines, secretary-treasurer.

Dr. Madelene M. Donnelly, director of the Division of Maternal and Child Health at the State Department of Health, underwent surgery on September 27.

Dr. Berl Michaelson, a graduate of the College

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge at inner corner of heel where support is most needed.
- Special Supreme rubber heels are longer than most anatomic heels and maintain the appearance of normal shoes.
- The patented arch support construction is guaranteed not to break down.
- Innersoles are guaranteed not to crack, curl, or collapse. Insulated by a special layer of Texon which also cushions firmly and uniformly.
- Foot-so-Port lasts were designed and the shoe construction engineered with orthopedic advice.
- NOW AVAILABLE! Men's conductive shoes. N.B.F.U. specifications. For surgeons and operating room personnel.
- By a special process, using plastic positive casts of feet, we make more custom shoes for polio, club feet and all types of abnormal feet than any other manufacturer.

Write for details or contact your local **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

in arthritis
and
allied disorders...



nonhormonal anti-arthritic

BUTAZOLIDIN®

(brand of phenylbutazone)

relieves pain • improves function • resolves inflammation

Employing the serum protein-polysaccharide ratio (PR) as an objective criterion of rheumatoid activity, it has again been shown that BUTAZOLIDIN "...produces more than a simple analgesic effect in rheumatoid arthritis."[1]

Clinically, the potency of BUTAZOLIDIN is reflected in the finding that 57.6 per cent of patients with rheumatoid arthritis respond to the extent of "remission" or "major improvement."[2]

Long-term study has now shown that the failure rate with BUTAZOLIDIN in rheumatoid arthritis, and particularly in rheumatoid spondylitis, is significantly lower than with hormonal therapy.[3]

(1) Poyne, R. W.; Shetlor, M. R.; Forr, C. H.; Hellboum, A. A., ond Ishmoel, W. K.: J. Lob. & Clin. Med. 45:331, 1955. (2) Bunim, J. J.; Willioms, R. R., ond Block, R. L.: J. Chron. Dis. 1:168, 1955. (3) Holbrook, W. P.: M. Clin. North Americo 39:405, 1955.

BUTAZOLIDIN® (brand of phenylbutazone). Red cooted toblets of 100 mg.

BUTAZOLIDIN *being o potent theropeutic ogent, physicions unfamilior with its use ore urged to send for literoture before instituting theropy.*

GEIGY PHARMACEUTICALS Division of Geigy Chemical Corporotion
220 Church Street, New York 13, N. Y.
In Conodo: Geigy Phormoceuticals, Montreol

51155

Geigy

of Medicine at SUI who has been in Alaska for five years working for the government, has opened a practice at Dakota City. She is a sister of **Dr. Don Michaelson**, lately of Boone and now of Sac City.

Dr. James B. Campbell, a recent graduate of the College of Medicine at SUI, has begun practice with **Dr. Edward F. Fleming**, in Rockwell.

Ingersoll Avenue, Des Moines, is fast becoming "doctors' row." **Drs. F. Eberle Thornton** and **Donald W. Blair**, orthopedists, occupied their new building at number 2801 during the third week in October, and **Dr. Joe M. Standefer**, a pediatrician, moved into his new offices at number 3732 at about the same time.

Officers of the Iowa Dermatologic Society for 1955-1956, elected at the group's annual meeting at Iowa City on October 8, are **Dr. Maurice H. Noun**, Des Moines, president; **Dr. Otto C. Stegmaier, Jr.**, Davenport, vice-president, and **Dr. Robert G. Carney**, Iowa City, secretary-treasurer. The next regularly scheduled meeting will be held in October, 1956.

On October 18, 19 and 20, **Dr. J. W. Culbertson**, head of the cardiovascular laboratory at SUI, spoke on "Current Treatment of Arterial Hypertension," and **Dr. W. C. Keettel**, professor of obstetrics at SUI spoke on "Abortions and Chronic Diseases Related to Obstetrics," at circuit meetings of the Wisconsin State Medical Association in Rice Lake, Wisconsin Rapids and Appleton.

Dr. Robert C. Riehle recently became associated with **Dr. A. H. Grau** in general practice at Denison. He is a 1954 graduate of the College of Medicine at SUI, and he interned at Great Lakes Naval Hospital.

Dr. Don Michaelson moved his practice from Boone to Sac City on October 17.

Dr. Peter Jerome, formerly of Muscatine, has joined the staff of the West Davenport Clinic. He is a specialist in internal medicine.

At Fort Dodge, **Dr. Francis E. Giles** has opened an office for the practice of urology. A graduate of the medical school at the University of Minnesota, he practiced in Cresco, served a three-year residency at SUI, then went into Army service, and was only recently separated. His military rank is that of major.

1950 Cortone® | 1952 Hydrocortone®
1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets
(PREDNISOLONE, MERCK) 2.5 mg.—5 mg. (scored)

the delta$_1$ analogue of hydrocortisone

Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

SHARP & DOHME
Philadelphia 1, Pa.
Division of Merck & Co., Inc.

Dr. Thomas P. Board has joined **Dr. W. A. Tice** in the practice of neurology and psychiatry at Waterloo. He is a 1940 graduate of the Northwestern University Medical School, he interned at a hospital in Albany, was in military service from 1942-1945, took specialty training at Cook County Psychopathic Hospital, and since then has worked there and in Chicago mental health centers.

DEATHS

Dr. Elwin G. Rawson, 70, of Anamosa, died in his sleep on the night of September 16. For many years he was physician at the reformatory there.

Dr. John Chase Dennison, 89, of Bellevue, a Life Member of the Iowa State Medical Society, died of cerebral hemorrhage at the hospital there on September 21.

Dr. John Thomas McClintock, 82, of Iowa City, a Life Member of the Iowa State Medical Society and a professor emeritus of physiology at the State University of Iowa, died on September 24.

Dr. Lawrence Elam Kelley, 73, died of a heart ailment at his home in Des Moines on September 30. He practiced in the city from 1912 until 1951, and he was a Life Member of the Iowa State Medical Society.

Dr. Robert Frank Moerke, 48, of Burlington, president of the Des Moines County Medical Society, died of leukemia on September 28.

Dr. Fred Lawrence Nelson, 77, an Ottumwa physician and surgeon, was killed in an automobile accident near Carthage, Illinois, on October 1, and his wife was injured. He was a Life Member of the Iowa State Medical Society.

AMA BOOKLET ON INDUSTRIAL MEDICINE

"Guiding Principles for Evaluating Management and Union Health Centers" is the title of a booklet that has been prepared by the AMA council on Medical Service and Council on Industrial Health. It contains a code for the guidance of private practitioners and medical societies in their dealings with health services that are supported by industrial firms and by labor unions.

The House of Delegates of the AMA has asked that local medical societies and individual doctors study the booklet in advance of the clinical session in Boston next month, so that they can tell their representatives what they think of it. At the Boston meeting, it is to be submitted for approval.

Relax the best way
... pause for Coke



Time out for refreshment

DRINK Coca-Cola REG. U.S. PAT. OFF.



SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa
Thursday at 11:15 a.m.

"Medicine, U. S. A."

November 3 ..... Best Laid Schemes
November 10 ..... Best Husband
November 17 ..... Secret Flight
November 24 ..... For All His Life

WSUI—Iowa City, Iowa
Tuesday at 11:45 a.m.

"Heart of America"

November 1 ..... Coronary Disease
November 8 ..... Overweight
November 15 ..... High Blood Pressure
November 22 ... Surgery for Heart Valve Disease
November 29 ..... Stresses and Strains

TELEVISION

WOI-TV—Ames, Iowa
Thursday at 9:30 p.m.

"Medical Diary"

November 3 ..... Diabetes
November 10 ..... Deafness
November 17 ..... Training the Deaf
November 24 ..... What to Do

KGLO-TV—Mason City, Iowa
Sunday at 5:00 p.m.

"Medical Diary"

November 6 ..... The Heart Patient
November 13 ..... Glaucoma
November 20 ..... Auto Accidents
November 27 ..... The Senior Medical Student

KCRG-TV—Cedar Rapids, Iowa
Tuesday at 6:30 p.m.

"Your Health"

November 1 ..... Overweight and Underweight
November 8 ..... Heart Disease

"Medical Diary"

November 15 ..... Poliomyelitis
November 22 ..... The Heart Patient
November 29 ..... Glaucoma

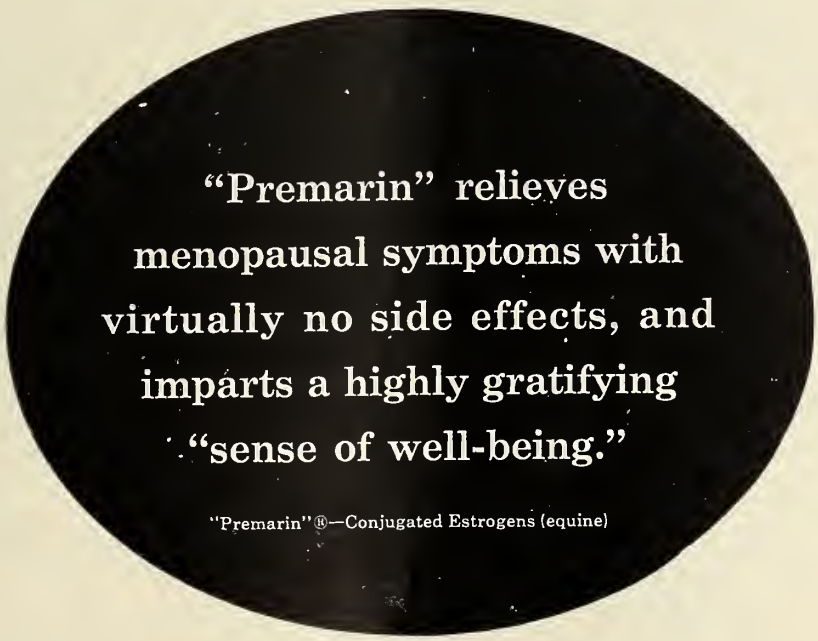
KTIV-TV—Sioux City, Iowa
Sunday at 3:30 p.m.

"Your Health"

November 6 ..... Overweight and Underweight
November 13 ..... Heart Disease

"Medical Diary"

November 20 ..... Poliomyelitis
November 27 ..... The Heart Patient



CARDIOVASCULAR AND PULMONARY DISEASES

The Department of Medicine at the University of Kansas School of Medicine is offering a series of one-month residencies by which graduate physicians can obtain supervised experience and training in the new technics of treating cardiovascular and pulmonary diseases. In cardiovascular diseases, the starting dates are November 1, 1955, and March 1, April 1 and May 1, 1956. In pulmonary diseases, they are November 1, 1955, and January 2, April 1 and May 1, 1956. No more than two enrollments in each field will be available for any of those starting times.

REVISED LIST OF AMA FILMS

A revised list of films available through the AMA motion picture library has been prepared, and copies are available on request. The catalog includes 83 films that are suitable for showing to medical societies, hospital staff meetings and other scientific groups, and it also includes 36 health films of interest to physicians who are called upon to speak before lay audiences.

PEDIATRICS, OBSTETRICS AND GYNECOLOGY

The Department of Postgraduate Medicine at the University of Michigan Medical School has announced its annual conference in Pediatrics, Obstetrics and Gynecology, January 23-28, 1956, at the University Hospital and Woman's Hospital, Ann Arbor. Pediatrics is scheduled January 23 and 24, pediatrics and obstetrics January 25, and obstetrics and gynecology January 26, 27 and 28.

The guest speakers will include Dr. J. C. Ullery, chairman of the Department of Obstetrics and Gynecology at Ohio State University, and Dr. Robt. A. Kimbrough, chairman of the Department of Obstetrics and Gynecology at the University of Pennsylvania.

DEATHS STILL DECREASING

American wage earners and their families recorded a lower death rate during the first six months of 1955 than ever before in the country's history. Through June, the death rate among the millions of persons studied by the Metropolitan Life Insurance Company was 644.4 per 100,000, as compared with 652.1 last year, and 668.6 for the first half of 1953.

50 and eight years

Treating Alcohol and Drug Addiction



RALPH CLINIC

Formerly The Ralph Sanitarium

A Department of the Benjamin Burroughs Rolph Foundation for Medical Research

Ralph Emerson Duncan, M.D., Medical Director.

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone VIctor 3624



Why you need 3½ HP to plow snow

Because Plow Does ALL The Work; You Only Steer It

Here's a sidewalk rotary snow plow that won't mulch leaves, mow grass or dig gardens, but it *will* plow snow from here to breakfast for you.

The *Sno-Flyr's* 3½ HP engine makes an effortless task out of the lung bursting job of clearing sidewalks and driveways; it does *all* the work — you just guide it.

Engine has two speeds: *slow* (comparable to low gear driving) for plowing heavy, wet or deep snow; and *normal* for light snow plowing at walking speed.

Casting chute revolves in arc from left to right for full control of snow casting. It throws 600 lbs. of snow per minute — up to 25 feet in distance.

Made by the world's largest manufacturer of rotary snow plows, THE WM. BROS BOILER & MFG. CO., Road Machinery Div., 1057 Tenth Ave. S. E., Minneapolis 14, Minnesota.

DON'T WAIT FOR 2 FT. OF SNOW: ORDER NOW.

BROS *Sno-Flyr**

It's mechonicolly sound, ond, further, it's bug-free. The Sno-Flyr hos never been surpossed in its horsepower ronge, for performonce under toughest conditions. And we offer two models — 20" plowing width ond 26" plowing width, with 3½ and 6½ hp name brand engines, respectively.

Thumb-nut adjustoble "capper" deflects snow streom to ony height desired.

Hondy controls select speed ond chonge direction of casting chute, which turns 180°.

Positive roller chain drive. Rotor slots "knife" the snow, preventing rotor "balling."

Engine has winterized feotures for storting ond operoting in coldest weather.

*Pat. Pending

BROS

SOLD BY INDEPENDENT HARDWARE DEALERS

(or write us for full information and prices)

RAYS OF HOPE IN MENTAL HEALTH

Although the mental health problem in the United States has been growing in magnitude over the past 20 years, certain features of the problem appear worse than they really are, a current report by the Metropolitan Life Insurance Company's statisticians sets forth.

Although the number of first admissions of psychiatric patients to hospitals for long-term care has increased more than 60 per cent over the 20-year period, and the number of patients under care in these institutions has risen almost as rapidly, a substantial part of the rise reflects merely the increase in population and the growing proportion of people at the older ages.

In New York State, for example, about 30 per cent of the increase in first admissions of women to mental hospitals during the past two decades is accounted for by these population factors. The statisticians note as significant that patients with mental disorders associated with old age constitute an increasing proportion of all first admissions to mental hospitals, and now account for one-fourth of the total.

"A more enlightened attitude has lessened the reluctance of the public to seek institutional care for persons with mental disorder," the report states. "Because the proportion of people living in small dwelling units has increased, mental patients who in the past might have been kept at home now are more likely to be placed in hospitals for treatment."

A brighter spot in the over-all picture is seen in the fact that substantial progress has been made in the treatment of various types of mental disease. The long-term outlook for recovery is favorable, it is noted, and survivorship among insurance applicants with a history of mental illness compares not too unfavorably with standard risks.

The report points out that the attack on the problem of mental illness has been gaining momentum in recent years.

"While much is being done, the effort is still far from commensurate with the magnitude of the problem," the statisticians comment. "There is good reason to expect that a broadened and intensified program would bring marked progress in the field of mental health, as it has in so many others.

—NEW YORK STATE JOURNAL OF MEDICINE, July 15, 1955.

MD'S ARE FAMILY MEN PAR EXCELLENCE

The popular belief that medical men are poor husband material may, in a measure, be justified in that their work keeps them extraordinarily busy. But by and large, the women they marry are willing to stay with them. In a poll of a national

SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 **Capacity 200 beds**

Under the Supervision of the Sisters of Mercy

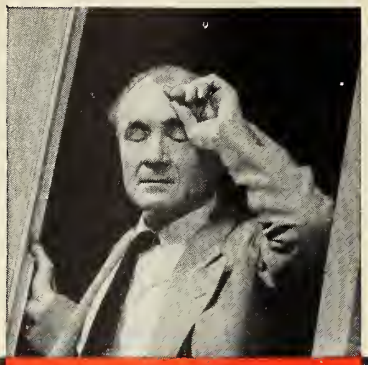
An Institution for the Study and Treatment of Nervous and Mental Disorders.

Conditioned Reflex and Antabuse Therapy for Alcoholism

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director
JAMES D. MAHONEY, M.D., Associate Director **RICHARD B. LEANDER, M.D.**

Ménière's syndrome, cerebral arteriosclerosis, fenestration surgery, streptomycin toxicity



radiation therapy

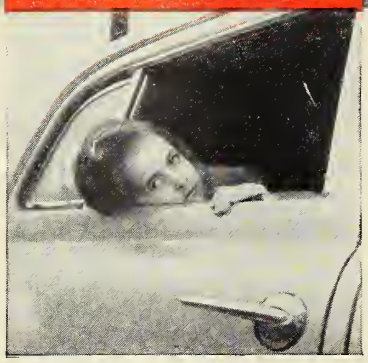




narcotization



motion sensitivity in every form of travel



effective
control of
nausea
vomiting
vertigo

associated with labyrinthine dysfunction

BONAMINE* HCl

Brand of meclizine hydrochloride

Two convenient dosage forms . . . tasteless Tablets (25 mg.) and mint-flavored, universally acceptable Chewing Tablets (25 mg.). Bonamine is ethically promoted. *Trademark

Pfizer Pfizer Laboratories, *Division, Chas. Pfizer & Co., Inc.,* Brooklyn 6, N. Y.

cross-section of physicians, MEDICAL ECONOMICS has found that "90 per cent are still sharing bed and board with their original mates." Just 6 per cent have been divorced, as contrasted with the national divorce rate of nearly 20 per cent.

The same study reveals that the typical medical father has three children and that 18 per cent have four or more children.

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of September 10, 1955

Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(U.S. Naval Hosp., Memphis, Tenn.) ..Lt., U.S.N.R.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Blaha, Vernon B., Marshalltown
(Great Lakes, Illinois) .....Lt. Comm., U.S.N.R.
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
(Marine Corps Recruit Depot, San Diego, Calif.) .....Lt.(j.g.), U.S.N.R.
Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dieckman, M. R., Grundy Center
(Great Lakes, Illinois) .....Lt. (j.g.) U.S.N.R.
Eckberg, R. A., Hubbard
(Laredo AFB, Texas) .....Capt., USAF
Ehmke, Bruce C., Iowa City
(Brooke Army Med. Ctr., Ft. Sam Houston, Texas) .....Capt., A.U.S.
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Geist, James H., Iowa City .....
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Gottsch, Joseph C., Shenandoah
(Bolling AFB Hospital, Washington, D. C.) .....Capt., U.S.A.F.
Hach, Felix, Ankeny
(Ft. Sam Houston, Texas) .....Capt., A.U.S.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.
Hodges, R. E., Iowa City
(Silver Spring, Maryland) .....Capt., A.U.S.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City
Grosse Isle, Michigan) .....N.A.S.
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.

HILLCREST HOSPITAL

Operated by The Retreat Company

Des Moines 12, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

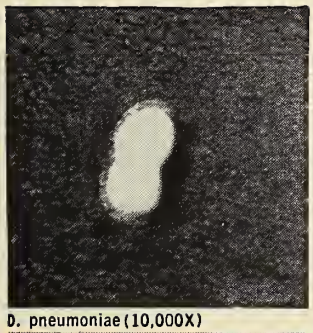
HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
ADA DUNNER, M.D., Psychiatrist
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist
MARTIN J. KRAKAUER, Psychologist

SYDNEY L. MACMULLEN, President
HERBERT W. VETTER, Administrator

2801 Woodland Ave. **Phone 5-2121**

The organisms commonly involved in

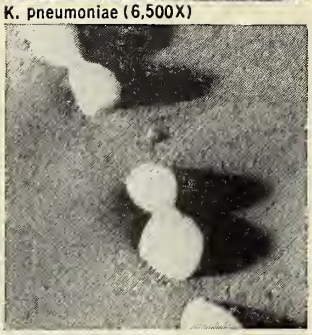
Pneumonia



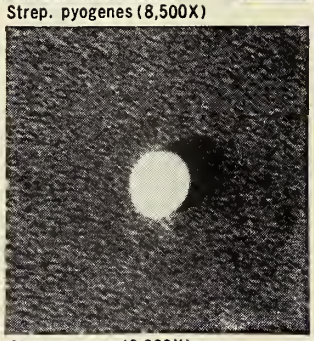
D. pneumoniae (10,000X)



K. pneumoniae (6,500X)



Strep. pyogenes (8,500X)



Staph. aureus (9,000X)

Upjohn

ELECTRON MICROGRAPHS

***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

PANMYCIN*

HYDROCHLORIDE

100 mg. and 250 mg. capsules • 125 mg. and 250 mg./tsp. oral suspension (PANMYCIN Readimixed)
100 mg./cc. drops • 100 mg./2 cc. injection, intramuscular
100 mg., 250 mg., and 500 mg. vials, intravenous

*TRADEMARK, REG. U. S. PAT. OFF.—THE UPJOHN BRAND OF TETRACYCLINE

Keil, P. G., Des Moines
(Maxwell AFB, Alabama) .....Lt. Col., U.S.A.F.
Knouf, Clare E., Lake City
(519 SW 3rd Ave., Portland, Oregon)
.....Lt. Commander, U.S.N.R.
Koptik, George, Jr., Garwin
(Camp Lucas, Sault Ste. Marie, Mich.) .....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Lyman, Frank L., Jr., Fort Madison
(U.S. Naval Hosp., Beaufort, S. C.) ....Lt., U.S.N.R.
McCoy, John T., Cedar Falls
(U.S. Naval Hosp., Philadelphia, Penn.) Lt., U.S.N.R.
McFadden, F. Ross, Davenport
(Corpus Christi, Texas) ....Lt. Commander, U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Olson, Stewart O., Des Moines
(Seattle, Washington) .....Lt., USN
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Rodgers, G. H., Mt. Ayr
(Brooke Army Hosp., Ft. Sam Houston, Texas)
.....Lt. A.U.S.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital, Seattle) .....
Sacco, Severino O., Iowa City
(Ft. Sam Houston, Texas) .....
Saunders, R. J., Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston, Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Washington, D. C.) .....Lt., USNR
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Sinton, D. W., Iowa City
(Denver, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.
Swanson, Eric M., Iowa City
(Omaha, Nebraska) .....
Thompson, J. W., Ames
(Camp Breckinridge. Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(11th Field Hosp., APO 178, New York City)
.....Capt., A.U.S.
Wilson, Robert G., Missouri Valley
(Clovis AFB, New Mexico) .....1st. Lt., USAF
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D.. Ruthven (Deep Sea Divers, Naval Gun Factory, Washington, D.C.) .....Lt., U.S.N.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the JOURNAL, 529-36th Street, Des Moines 12, Iowa.

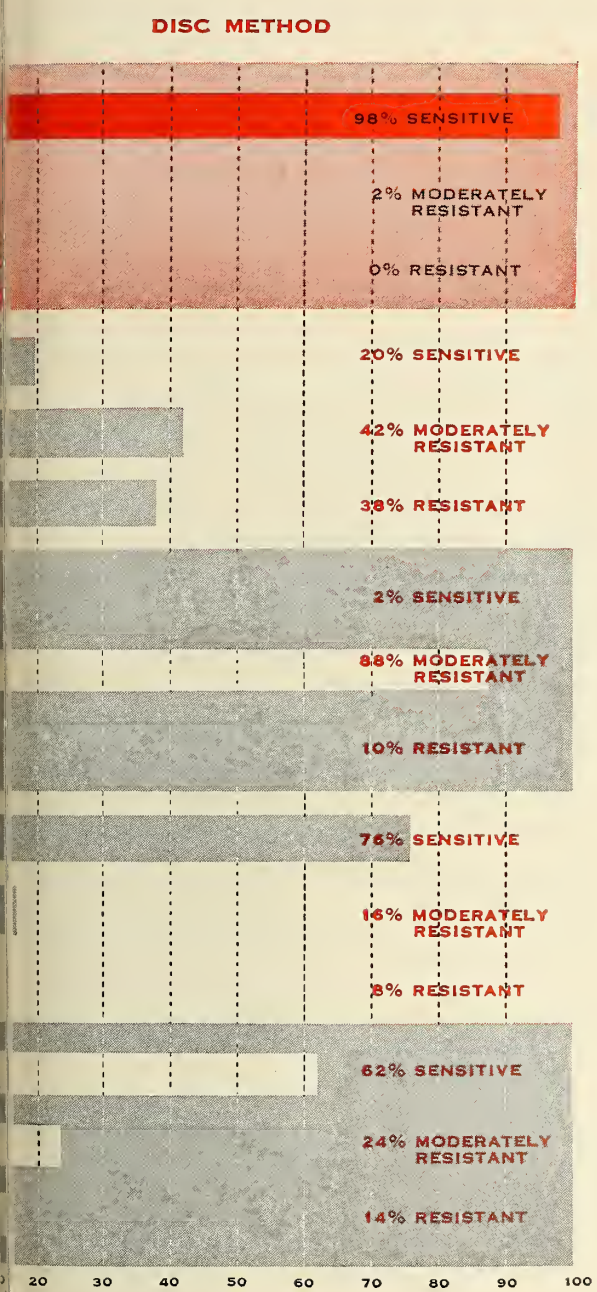
RADIUM & RADIUM D+E
(including Radium Applicators)
For All Medical Purposes
Est. 1919
Quincy X-Ray & Radium Laboratories
(Owned and Directed by a Physician-Radiologist)
HAROLD SWANBERG, B.S., M.D., Director
W. C. U. Bldg., Quincy, Illinois

WE ARE PLEASED TO OFFER TO THE DOCTORS OF IOWA
COURTESY DISCOUNT CARDS
Please Write or Phone 3-8049
We'll be happy to mail your card to your office or home.
Bernie's
"IOWA'S BIGGEST LITTLE APPLIANCE STORE"
Nationally Known Air Conditioners, Radios, T.V., Freezers, Refrigerators, Vacuum Cleaners, Etc.
218 West 2nd Des Moines, Iowa

GYNECOLOGIC CYTOLOGY SERVICE
INTERPRETATION OF CERVICO-VAGINAL, ETC. (PAPANICOLAOU) SMEARS FOR THE DIAGNOSIS OF CARCINOMA
KITS (SLIDES, SPATULAS, FIXATIVE AND MAILING CONTAINERS) AND INSTRUCTIONS FOR TAKING AND MAILING SMEARS FURNISHED ON REQUEST
M. WM. RUBENSTEIN, M.D.
GYNE-CYTOLOGY LABORATORY
104 S. MICHIGAN AVE. CHICAGO 3, ILL.

resistant staphylococci...

l by Three Methods*



t from Branch, Starkey, Rogers & Power[6]

Chloromycetin®

for today's problem pathogens

The increasing incidence of infections due to antibiotic resistant staphylococci poses a major clinical problem.[1-4] This is true even when recently introduced antibiotic agents are employed.[2,3,5] Recent laboratory investigations, however, show that development of staphylococcic resistance to CHLOROMYCETIN (chloramphenicol, Parke-Davis) is seldom encountered,[3,6-8] In fact, CHLOROMYCETIN "...is being used increasingly in staphylococcic infections resistant to other antibiotics."[9]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References: (1) Spink, W. W.: *Arch. Int. Med.* 94:167, 1954. (2) Finland, M.: *J.A.M.A.* 158:188, 1955. (3) Tebrock, H. E., & Young, W. N.: *New York J. Med.* 55:1159, 1955. (4) LeMaistre, C.: *M. Clin. North America* 39:899, 1955. (5) Kagan, B. M.: *J.M.A. Georgia* 44:210, 1955. (6) Branch, A.; Starkey, D. H.; Rodgers, K. C., & Power, E. E., *in* Welch, H., & Marti-Ibañez, F.: Antibiotics Annual, 1954-1955, New York, Medical Encyclopedia, Inc., 1955, p. 1125. (7) Kutscher, A. H.; Seguin, L.; Lewis, S.; Piro, J. D.; Zegarelli, E. V.; Rankow, R., & Segall, R.: *Antibiotics & Chemother.* 4:1023, 1954. (8) Weil, A. J., & Stempel, B.: *Antibiotic Med.* 1:319, 1955. (9) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* 5:365, 1955.

MEDICAMENTA VERA

PARKE, DAVIS & COMPANY DETROIT, MICHIGAN

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. XLV DECEMBER, 1955 No. 12

CONTENTS

Replacement Prosthesis for Fractures of the Neck of the Femur
Lee T. Ford, M.D., and J. Albert Key, M.D., St. Louis, Missouri 597
Experience With Abruptio Placentae and Fibrinogenopenia
E. Stewart Taylor, M.D., and Harold M. Haugen, M.D., Denver, Colorado 600
The Current Therapy of Essential Hypertension
Irving J. Hanssmann, M.D., Council Bluffs . . . 606
Suicide and the Physician
Paul M. Kersten, M.D., Fort Dodge 610
Antimicrobial Therapy of Tuberculosis—A Statement of the Committee on Therapy of the American Trudeau Society 614
State University of Iowa College of Medicine Clinical Pathologic Conference 620

EDITORIALS

Federal Health Budget, 1956 627
Tractors and Prostatitis 628
Prophylaxis for Neck Pains 628
Summary of Testimony in the Hospital-Physician Trial 629

SPECIAL DEPARTMENTS

Coming Meetings 626
President's Page 638
The Journal Book Shelf 639
Iowa Academy of General Practice 641
Mental Illness 642
Blue Cross-Blue Shield 644
Your Blue Shield President Reports 645
The Doctor's Business 646
Woman's Auxiliary News 647
State Department of Health 650
County Societies 652
The Month in Washington xviii
Personals xxii
Deaths xxxv
Roster of Iowa Physicians in Military Service . . xxxvi
Speaker's Bureau Schedules xxxvii

MISCELLANEOUS

Obstetrics for General Physicians 609
Obstetrics Short Course 609
Ophthalmology and Otolaryngology 619
Refresher Course in Surgery 619
Nail Polish Seals Fungal Infection 625
Mental Illness Film in AMA Library 629
Social Workers Deserve Cooperation 636g
Uniform Claim Blanks Nearly Ready 636g
Letter to the Editor 636h
Prophylaxis for Rheumatic Fever 636h
John Thomas McClintock, M.D., 1873-1955: An Appreciation 636h
New Virus Infection of Eye 637
Tax Pamphlet Appeals for AMEF Gifts 637
Gifts for SUI College of Medicine 640
Emergency Surgery for GP's 640
Continuation Course in Neurology 643
Public's Views on Health Costs 649
Fairs as Medical P-R Media 649
March of Medicine 649
Polio Ahead xxi
SUI Medical Research Center xxxv
Cirrhosis in Children xxxv

COPYRIGHT, 1955, BY THE IOWA STATE MEDICAL SOCIETY

EDITORS

EVERETT M. GEORGE, M.D., Scientific Editor..Des Moines
EDWARD W. HAMILTON, Ph.D., Asst. Editor..Des Moines

EDITORIAL BOARD

JOHN S. GREENLEAF, M.D.....Iowa City
ALLAN G. FELTER, M.D.....Van Meter
DANIEL A. GLOMSET, M.D.....Des Moines
TOM D. THROCKMORTON, M.D.....Des Moines

PUBLICATION COMMITTEE

FRED STERNAGEL, M.D.....West Des Moines
GEORGE H. SCANLON, M.D.....Iowa City
ERNEST M. KERSTEN, M.D.....Fort Dodge
RICHARD F. BIRGE, M.D., Secretary.....Des Moines
EVERETT M. GEORGE, M.D., Editor *Ex Officio* Des Moines

Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



Replacement Prosthesis for

Fractures of the Neck of the Femur

LEE T. FORD, M.D., AND THE LATE J. ALBERT KEY, M.D.

ST. LOUIS, MISSOURI

RADICAL AND TOTAL substitution of the head and/or neck of the femur in certain conditions involving these structures has been carried out with increasing frequency in recent years. Enthusiasm has become so great that literally thousands of prostheses of many different types and of several different materials have been inserted in hip joints for many different conditions. As a result, complications have been encountered in many cases. They have been so numerous, indeed, that a number of surgeons now consider the procedure itself to be unwise. Dr. Claude Lambert, of Chicago, has summarized a recent survey of many of the complications which can follow the insertion of a prosthesis in the hip, and his observations deserve the careful consideration of all surgeons who are contemplating such a procedure.

SELECTION OF PATIENTS

In our opinion, however, there are several types of patients having fractures of the neck of the femur, either old or recent, in whom prosthetic replacement is the procedure of choice, for it may provide such patients with hips that appear to function as well as, or in some cases better than, those that might have been anticipated from the more time-honored methods of treatment.

If, in an ideal situation, a prosthetic replacement is used in a fresh fracture of the neck of the femur, then it should be inserted in such a manner that no important muscles about the hip are detached, that a good mechanical substitution with a proper fit and proper fixation of the prosthesis and maintenance of proper length of the neck are obtained, and that there is no need for postoperative protection, other than for the soft-tissue wound.

Originally, we used a Judet or stem-type prosthesis in some subcapital fractures of the neck of the femur, substituting the prosthesis for the fractured head. But even with proper insertion, the hips that were so repaired failed to function satisfactorily, for the neck of the femur had been shortened, and as a result, there was a relative weakening of the musculature about the hip, especially of the abductors. This problem was soon solved through the introduction of the intramedullary types of prostheses, such as those devised by Fred Thompson, Eicher, Austin-Moore and others. When such prostheses are used in fresh fractures of the neck of the femur, complete restoration of the length of the neck should be obtained, unless an excessive amount of the neck has been removed.

When a prosthesis is inserted for a fresh fracture of the neck of the femur, both the problem of aseptic necrosis of the head of the femur and the problem of non-union of the fracture are avoided. On the other hand, it must be readily admitted that there can be many complications, some of them quite serious. Naturally, the surgical procedure for inserting the prosthesis is a more extensive one, and it may be more shocking to the patient and more prolonged, than is a closed reduction followed by "blind" nailing with a Smith-Petersen nail or another similar fixation. As one inserts the prosthesis, he may encounter mechanical difficulties, such as an improper fit of the head of the prosthesis to the acetabulum, or of the stem of the prosthesis to the shaft of the femur. Or there may be a fracture of the shaft of the femur during the insertion of the

Dr. Ford is a clinical instructor in surgery, and until his death on August 6, 1955, Dr. Key was a clinical professor of surgery at Washington University School of Medicine, 600 South Kingshighway, St. Louis, Missouri.

prosthesis or during reduction of the hip after its insertion. Infection following such a surgical procedure is catastrophic if it is extensive, and it usually cannot be cleared until the foreign body has been removed. Even if the infection can be cleared, the patient is left with an unstable, shortened extremity consequent to the absence of the head and neck of the femur.

Another disadvantage of replacement prostheses is that no one knows what the long-term picture may be. Many patients appear to be doing well after two, three or four years, but what their conditions will be after 20, 30 or 40 years may be another story. Exactly how the cortical bone of the femur will tolerate the pressure of metal against it for a period of years is not definitely known. Nor can one be sure of the manner in which the articular cartilage of the acetabulum will tolerate the articulation of the head of the prosthesis against it for a third or a half lifetime. For those reasons, it seems unwise, in any but exceptional instances, for one to insert a prosthesis into the hip in case of a fresh fracture of the neck of the femur if the patient is under 65 or 70 years of age.

One good indication for replacement prosthesis of the head and neck of the femur, then, is a subcapital fracture of the neck of the femur, for it is more likely to develop an aseptic necrosis of the head. Another sort of case in which it is advisable is the oblique fracture that might easily give one difficulty in reducing it properly, pinning it securely and keeping it pinned. But, for the reason that we have already given, only elderly patients should be so treated.

Recently, we have lengthened our list of indications, in so far as the types of fracture are concerned, and have placed prostheses in the hips of patients with transcervical fractures of the neck of the femur, in cases that would have caused us difficulty in obtaining a satisfactory reduction by closed manipulation preparatory to nailing. The older the individual is and the less cooperative, because of senility, the more likely it is that an adequate replacement prosthesis is the treatment of choice. Ironically, within reasonable limits, the successful insertion of a prosthesis may convert a poor medical risk into a primary medical and nursing problem overnight, for following the insertion of the prosthesis, the hip can be manipulated, the patient can be moved freely, and he can even be permitted to get up and bear full weight upon the hip that was fractured only the day before.

If, in the judgment of the surgeon and the anesthetist, the patient is in such poor shape medically that he is unable to withstand the anesthetic and the surgery incident to the insertion of a prosthesis, then an attempt should be made at reduction under local anesthesia, followed by fixation with a Smith-Petersen nail, Moore pins or Knowles pins. In that sort of case, of course, while one is awaiting the healing of the fracture he can only hope that an aseptic necrosis does not occur.

A prosthesis may be suitable in a fracture of the neck of the femur that has been nailed, but has "come apart" in the early weeks. Another type of case for prosthetic replacement is that in which a fracture of the neck of the femur has resulted in extensive aseptic necrosis of the head of the femur, especially in association with a non-union of the fracture. Such a patient needs not be quite so elderly as the one in whom a fresh fracture can properly be treated by the insertion of a prosthesis. He can be anywhere upwards of 50 or 55 years of age. If a non-union of the neck of the femur exists in association with a viable head, then, rather than prosthetic replacement, one of the types of osteotomy combined with a bone graft should be considered the procedure of choice.

Marked osteoporosis of bone is a contraindication for replacement prosthesis, since it increases the likelihood of fracture of the shaft either during insertion of the prosthesis or during its reduction into the acetabulum.

Replacement prosthesis can be of value to a patient in whom the head or the neck of the femur has been destroyed or pathologically fractured by a tumor, particularly a metastatic one. The tumorous head and/or neck of the femur can be removed and, provided that there is a sufficient base of the neck, a prosthesis can be inserted that will give him a stable extremity for the remainder of his days. This treatment, of course, is no more than palliative.

SURGICAL PROCEDURE

As we have already said, for the best functional result in replacement prosthesis for the head and neck of the femur, it is important that the incision be carried out in such a way that no muscles are detached unless absolutely necessary, and also that the full length of the neck of the femur can be maintained or restored if possible. In the case of a non-union in which there has been absorption of the neck of the femur, it is frequently quite helpful to place the patient in preliminary skeletal traction of 20 to 25 lbs. for a week or two prior to surgery.

The incision that has been found most useful is the Heuter incision, which is the vertical limb of the Smith-Petersen approach to the hip. This incision is made from the anterior superior spine downwards six or eight inches. One enters a plane between the sartorius medially and the tensor fascia femoris laterally, being careful to protect the lateral femoral cutaneous nerve. The dissection is carried downwards, lateral to the rectus femoris muscle. No more than the reflected head of the rectus femoris is detached. No musculature is stripped from the iliac crest. The vessels are carefully ligated, especially the ascending branches

of the lateral femoral circumflex vessels. The capsule of the hip joint is then exposed and the joint is entered. The head of the femur is then removed. The neck of the femur is shortened a suitable amount by means of an osteotome, the cut being made at the proper angle to fit the prosthesis that is to be inserted. The acetabulum is then inspected and cleaned out. One chooses a prosthesis of the proper size by comparing the removed head of the femur with the prosthesis.

With some types of intramedullary prostheses, it may be necessary for the surgeon to enlarge or ream the medullary canal of the upper femur so that the shaft of the bone will not be fractured when the stem of the prosthesis is inserted. Since no more than a relatively limited incision is made, one is likely to have some difficulty in inserting the stem of the prosthesis into the shaft of the femur. Placing the patient's pelvis over the kidney rest of the operating table is a means of solving that problem. When one is ready to insert the prosthesis, he elevates the kidney rest so as to put the hip into rather marked hyperextension. At the same time, the extremity is adducted and externally rotated so that the prepared stump of the neck of the femur faces upwards to receive the stem of the prosthesis. When the prosthesis has been properly positioned in the femur, its reduction into the acetabulum is next in order. If the anesthetic has not produced complete and full relaxation, the administering of Anectine may be helpful. Though short acting, it provides full muscle relaxation to facilitate reduction of the prosthesis by flexion, traction and internal rotation of the extremity at the hip. It is usually unnecessary for one to use a skid for reduction of the prosthesis.

Occasionally on entering the hip joint by means of the incision that we have just described, we have found it expedient to excise considerable amounts of the anterior capsule of the hip joint. Our doing so has not occasioned any difficulty in postoperative management. Just before insertion of the prosthesis, it is wise for one to inspect the acetabulum and the remainder of the hip joint cavity with great care, so as to be sure of having removed all fragments of bone, and he should trim off the ligamentum tiers, the remnant portion of which may be quite bulky and may interfere with the proper seating of the prosthesis in the acetabulum.

POSTOPERATIVE MANAGEMENT

The wound is closed by suture of the joint capsule, if present. There are no detached muscles to be repaired, and the wound is simply closed in layers with interrupted suture material. As soon as the patient awakens from his anesthesia, the tone of muscles, particularly the abductors and internal rotators, serves to make the prosthesis stable in the acetabulum. If the bone in the femur is of good strength and if a proper fit of the prosthesis has been obtained with reference to the acetabulum and to the medullary canal of the femur, there should be no need for special postoperative protection from a skeletal standpoint. Active motion of the extremity should be encouraged. The patient may be placed in the sitting position, moved, if necessary, to a wheelchair as soon as he has recovered from the anesthetic, and provided that there are no special difficulties, he may be permitted to put his full weight upon the extremity after no more than a few days.

It has been found quite wise to insist upon an X-ray of the hip following insertion and reduction of the prosthesis and before closure of the wound. In an occasional case, if one isn't careful, the stem of the prosthesis may break out through the lateral cortex of the femur. This possibility is especially likely if there is a track from a previously employed Smith-Petersen nail, and in an obese patient, it may be hard to detect. It is far better for one to discover this complication while the patient is still on the table with the wound open, than to discover it from an X-ray taken several days following surgery.

The possible complications that may accompany replacement prosthesis of the head and neck of the femur are many. Certainly there are more of them than of those that one is accustomed to seeing when fixation with a Smith-Petersen nail has followed closed reduction. Many of them, however, are technical ones that can be avoided if one selects cases properly and pays close attention to technical details. A marked limp consequent to shortening or to muscle instability can be avoided if the length of the neck of the femur is restored and if an approach to the hip joint is planned so as to require neither detachment nor damage to the muscles about the hip. Among the patients in whom lateral approaches have been made to the hip joint, with detachment of the abductor muscles, it has been our experience that the majority show at least some degree of Trendelenberg in the gait.

CONCLUSION

Over 100 replacement prostheses for fractures of the neck of the femur have been carried out by the surgeons on the orthopedic sections of Barnes Hospital and City Hospital, St. Louis. We have no follow-up studies to present, but we have had our share of complications—some of them serious. But because there have been a sufficient number of good results in the series, with well-satisfied patients, we feel that replacement prosthesis of the head and neck of the femur in carefully selected cases is a proper procedure. Ideally, the patients should be elderly individuals with fresh fractures of the neck of the femur, especially subcapital fractures or oblique ones. Or they may be cases in which nailing has failed, or cases of aseptic necrosis of the head of the

femur in patients the same age or slightly younger, especially when accompanied by non-union of the neck of the femur. A replacement prosthesis may be of value in a pathologic fracture of the neck of the femur.

As more experience is gained in the selection of cases and in the proper performance of the surgery, the results that are obtained will improve.

REFERENCES

1. Committee on Scientific Investigation of the American Academy of Orthopedic Surgeons: Preliminary survey of femoral head prostheses. J. Bone & Joint Surg., 35A:489-494, (Apr.) 1953.

2. Thompson, F. R.: Two and a half years' experience with Vitallium intramedullary hip prosthesis. J. Bone & Joint Surg., 36A:489-502, (June) 1954.

Experience With

Abruptio Placentae and Fibrinogenopenia

E. STEWART TAYLOR, M.D., AND HAROLD M. HAUGEN, M.D.

DENVER, COLORADO

THIS PAPER WILL present the recent experience that we have had at Colorado General Hospital with abruptio placentae, and with fibrinogenopenia. The latter is one of the complications of abruptio placentae and is a serious obstetric problem.

During the period July 1, 1946, to July 1, 1954, we encountered abruptio placentae 70 times among 7,928 deliveries on the obstetrical service of the Colorado General Hospital. The incidence of premature placental separation was one to each 113 deliveries. Fibrinogenopenia occurred twice in this series of 70 patients. In addition, we shall discuss five other pregnant patients with fibrinogenopenia. In four of these, fibrinogenopenia was associated with abruptio placentae, and in one it was a sequela of intrauterine fetal death.

ETIOLOGY OF ABRUPTIO PLACENTAE

The cause of premature separation of the placenta is unknown. It may occur during a pregnancy that has been entirely normal until the onset of placental separation. Of our own group of patients, 20 (29 per cent) had pre-eclampsia or hypertension that was recognized before the placenta separated. The overall incidence of toxemia in our clinic is but seven per cent. There appears to be a relationship between pre-eclampsia and the abruptio syndrome, but the nature of the relationship has not been clearly elucidated.

Abruption of the placenta has been produced experimentally both in dogs and in human beings.[1, 2] In pregnant dogs, it has been done by ligation of the vena cava below the junction of the renal veins. Compression of the vena cava at the time of cesarean section has produced complete separation of the placenta in women.[2] As a result of these experiments, Mengert has postulated that the weight of the pregnant uterus against the vena cava may be sufficient to block the return of venous circulation and thereby to establish a condition favorable for a separation of the placenta. Caldeyro-Barcia[3] agrees with Mengert that digital compression of the inferior vena cava will literally "blow off" the placenta, but he considers it unlikely that the pregnant uterus can compress the vena cava sufficiently to produce abruption. He states that in premature separation there is a marked basal myometrial hypertonus, with superimposed uterine contractions. This hypertonus overcompresses the intramyometrial veins, thereby increasing resistance to venous outflow from the intervillous spaces. The uterine hypertonus produces a greater increase in the intervillous blood pressure than in amniotic fluid pressure, since the pressure of the myometrial contraction on the intramyometrial veins is two or three times higher than the pressure that it exerts on the amniotic fluid. When this pressure differential increases to a critical level, abruptio placentae takes place.

Bartholomew[4] believes that the gross and the microscopic pathology of the placenta in pre-eclampsia, eclampsia and abruptio placentae are identical, showing dilated villous capillaries, obliterated intervillous spaces and varying degrees of nuclear necrosis of the chorionic epithelium. He postulates the following sequence of events: (1) oxytoxic stimulation causing spasm of sphincters of placental veins, (2) blockage of venous outflow, (3) distention of venous capillaries with enlargement of villi, (4) restriction of maternal intervillous blood flow, and (5) anoxic necrosis of chorionic epithelium, with sudden liberation of thromboplastin and coagulation of intervillous and subplacental blood. This, he believes, causes separation of the placenta. Bartholomew further believes that abruptio placentae is but a hemorrhagic manifestation of toxemia, and that it represents toxemia in its severest form. If sphincter spasm of the placental veins is severe, abruptio results, but if spasm

Drs. Taylor and Haugen are staff members in the Department of Obstetrics and Gynecology at the University of Colorado School of Medicine.

is less marked, placental necrosis proceeds more slowly, and the pressor and convulsive effects of breakdown products are more evident, as in eclampsia.

It seems clear that several of the mechanisms proposed are very closely allied, but there is still no clue as to the factor which initiates the chain of events.

Twenty-one per cent of our patients who had premature separation of the placenta had a secondary anemia of pregnancy (hemoglobin less than 10 Gm.) before the separation occurred. Others[5] have thought that anemia may be one of the predisposing factors for abruptio placentae. The incidence of pre-existing anemia in these patients is over twice the expected rate as seen in our own clinic.

CLINICAL TYPES

We have divided our 70 patients who had some degree of premature placental separation into three groups according to severity:

Mild, characterized by no maternal symptoms such as pain, but exhibiting external bleeding. No change in fetal heart rate. Forty-nine patients (70 per cent).

Moderate, characterized by external bleeding, uterine tetany, pain and tenderness, and disturbances in fetal heart rate. Fourteen patients (20 per cent).

Severe, characterized by such signs and symptoms as profound shock, external and internal bleeding, absence of fetal heart tones, rigid uterus, exquisite uterine tenderness and a vice-like abdominal pain. (We had but seven such severely affected individuals, two of whom had a hemorrhagic diathesis with fibrinogenopenia, and one of whom was our single maternal mortality among 70 abruptio placentae patients.)

SIGNS AND SYMPTOMS

Vaginal bleeding is the most frequent presenting symptom of abruptio placentae. It was the only symptom in approximately one-half of our patients who later proved to have abruptio placentae. Bleeding was accompanied by abdominal or uterine pain in another 15 per cent of patients. It is interesting to note that in one of our patients, pain was the only symptom of placental separation. Uterine tenderness and increased uterine tone are present if the degree of separation is sufficiently marked. These two signs occurred in approximately 15 per cent of our abruptio placentae patients. In a small number of patients, there were no symptoms or signs of the condition evident before delivery.

DIAGNOSIS

Except in patients with complete separation of the placenta, an accurate diagnosis is difficult to make before delivery. Often the diagnosis is suggested by the elimination of other major causes of antepartum or intrapartum bleeding. If external bleeding is accompanied by uterine tenderness, pain and hypertonus, the diagnosis is more readily established. In the moderately severe cases of placental separation, one may at times suspect the diagnosis because of localized uterine tenderness over the placental area, external bleeding and a rapid fetal heart beat. A toxemia patient who develops abruption of the placenta may have a relatively normal blood pressure in spite of considerable internal and external uterine bleeding, because the previously existing blood pressure may have been considerably elevated. Although clotting disturbances of the patient's blood may occur, they have been rare in our hospital series (two in 70). We do, however, look for fibrinogenopenia as a possible complication in all patients suspected of having premature separation of the placenta.

COMPLICATIONS

The sequelae of abruptio placentae to which nearly all maternal deaths can be attributed are the fibrinolytic syndrome, anuria and postpartum hemorrhage.

According to Bartholomew,[4] the fibrinolytic syndrome may arise in the following manner. Thromboplastin is liberated from the placenta into the general circulation at the time of placental separation. The excess thromboplastin then causes the formation of intravascular fibrin thrombi, with widespread plugging of pre-capillary tissues and possible exhaustion of fibrinogen from the blood. Blood incoagulability and the hemorrhagic tendency arise from this chain of events. This explanation makes clear that the degree of placental separation and thromboplastin liberation determines the degree of hypofibrinogenemia.

Another serious complication of abruptio placentae is anuria. Sheehan and Moore[6] believe that the anuria can be caused by renal lesions of varying severity resulting from spasm in the arterial supply to the renal cortex. This spasm is caused by renal ischemia which, Barry states,[5] is secondary to the shock incidental to severe abruptio placentae.

Postpartum hemorrhage in abruptio placentae is usually ascribed to uterine atony. The hemorrhage has often been considered to be associated with a Couvelaire uterus. The postpartum hemorrhage is usually not from uterine atony, but represents another manifestation of hypofibrinogenemia. Weiner, Reid and Roby[7] believe that postpartum hemorrhage rarely complicates abruptio placentae unless a clotting deficiency exists.

The treatment for a severe degree of abruptio placentae is directed toward evacuation of the uterus as soon as possible and toward prevention of hypofibrinogenemia and anuria.

In our mild cases of premature separation of the placenta, no treatment was required other than

replacement of blood loss and artificial rupture of the membranes.

TREATMENT

The moderate degrees of abruptio placentae are usually best managed conservatively. To exclude placenta previa, one should perform a vaginal examination under sterile conditions in the hospital. If the diagnosis of premature separation of the placenta is made, the membranes are ruptured, regardless of the length or dilatation of the cervix. It is felt that this procedure serves two purposes: (1) it immobilizes the placenta so as to prevent further blood loss, and (2) it relieves intrauterine pressure and aids in the prevention of afibrinogenemia. Blood transfusions are used freely, and clot observation tests are performed. If labor does not begin within two hours after amniotomy, oxytoxic stimulation is started. Page[8] feels that the administration of pitocin is not good practice because of the resultant elevation of intrauterine pressure and the possibility of promoting hypofibrinogenemia. He feels that since the fetus is in good condition and since procrastination may lead to hypofibrinogenemia, a cesarean section should be performed if labor does not begin within two hours after amniotomy. In our series, amniotomy successfully induced labor in 88 per cent of patients.

In severe degrees of abruptio placentae, treatment is directed entirely to the maternal emergency. The object of the treatment is to control maternal hemorrhage and to prevent or correct clotting defects.

The first step, coincident with the beginning of multiple transfusions, is to determine whether hypofibrinogenemia exists. A plasma fibrinogen level should be determined, and blood should be drawn hourly for the "clot observation" test until the patient is delivered. If fibrinogen is deficient, either there will be no initial clotting or there will be initial clotting with dissolution of the clot within an hour. Either of these circumstances is an indication for fibrinogen replacement therapy. The test for clotting ability of the patient's blood can easily be performed at the bedside. Five cubic centimeters of blood are drawn from the antecubital vein and placed in a dry test tube. Normally, a clot will form in four or five minutes and will remain stable in the test tube for an indefinite period at body temperature. When there is evidence of hypofibrinogenemia, one should give as many grams of fibrinogen in dextrose and water as he gives units of blood intravenously. One can gauge the response to fibrinogen administration by drawing repeated samples of the patient's blood and testing for clot formation and stability. Amniotomy is performed as soon as possible in severely affected patients. If labor does not ensue within two to four hours, cesarean section is performed. In the 70 patients in this series, only four individuals (6 per cent) were treated by cesarean section. The remaining 66 were managed conservatively. Two cesareans were performed for patients in the mild abruptio group, the remaining two cesarean operations being performed upon the severe abruptio patients.

In order to prevent the development of shock and renal anuria, the patient should be treated adequately with transfusions. An indwelling catheter should be placed in the bladder, and if the urinary output falls below 30 cc. per hour, intravenous procaine should be used. There was no patient with anuria in our series, but one patient with severe postpartum oliguria was successfully treated with two 500 mg. intravenous doses of procaine.

In the management of postpartum hemorrhage, hysterectomy should rarely be considered, since hemorrhage is usually from hypofibrinogenemia and not from uterine atony. If hypofibrinogenemia exists, hysterectomy merely provides many additional bleeding sites. Similarly, uterine packing serves only to traumatize tissues and increase bleeding.

RESULTS

The fetal mortality was 33 per cent, and of the 23 deaths, 20 were premature infants. In the mild abruptio group, the fetal mortality was 5 per cent. In the moderate abruptio series, the fetal mortality was 44 per cent, and in severe abruption of the placenta, the fetal mortality was 100 per cent. Although the fetal loss in mild abruptio placentae was 5 per cent, the fetal loss in those mothers who received sedation was 14 per cent. The factors of prematurity and retroplacental hemorrhage combined with maternal sedation have an adverse effect on oxygen exchange in the newborn.

We have had but one maternal death associated with abruptio placentae at the Colorado General Hospital during the past eight years. That patient died from adrenal cortical failure secondary to pituitary gland necrosis. The pituitary gland necrosis occurred as a complication of afibrinogenemia and obstetric shock.

DISCUSSION

We have reviewed our experience with abruptio placentae in a series of 7,928 obstetrical patients. The frequency of the problem is not great in any one hospital, but the community incidence of the problem is of profound importance because of the number of maternal deaths that may accumulate from the severe forms of the disease.

Although we have had only two patients in our Colorado General Hospital abruptio placentae group with fibrinogenopenia, between 1946 and 1954, we have been called as consultants on four others. And in addition to those six, we have seen one patient who demonstrated the acquired clotting defect as a complication of maternal sensitization to the Rh factor while carrying a dead eryth-

roblastotic infant in her uterus. Although the deficiency of the clotting mechanism seemed to be corrected by the substitution of human fibrinogen in four abruptio placentae patients, two of the four failed to survive because of other severe complications of the disease. The first patient whom we saw with afibrinogenemia, was in 1947. We were quite at loss for a means of coping with the problem.

CASE REPORT NO. 1

B. J. (D.G.H. 247,409) was in the hospital under treatment for mild pre-eclampsia of some weeks' duration. She was given intravenous human salt-free albumin as part of her treatment. While receiving the albumin, she had a severe chill. The albumin was discontinued. Shortly thereafter, she had a generalized convulsion and started to bleed from the gums, nose, rectum and vagina, and had signs of severe abruption of the placenta. Samples of venous blood drawn from the patient failed to clot. This crisis, in 1947, occurred before fibrinogenopenia was understood and before human fibrinogen had become available for therapeutic use. This particular patient never regained consciousness, and died within 15 hours. The pathologic examination revealed lesions in the kidney, brain and liver which were compatible with eclampsia. Gross hemorrhage was present throughout the respiratory, genital and digestive tracts. A massive retroplacental extrusion of blood was found within the uterus. The dead fetus was undelivered.

Reports then began to appear in the literature to bring this serious but unusual complication to our attention. De Lee,[9] Kellogg[10] and others had spoken of the syndrome, but most clinicians either had never encountered such a problem or had presumed that uterine atony was the cause of hemorrhage and death. There was the belief that a Couvelaire uterus and uterine atony were the essential causes of postpartum hemorrhage. Formerly, hysterectomy was advised and performed. Severe grades of uterine bleeding were not cured by hysterectomy, and patients died because of generalized purpura. It is now believed that the specific problem was afibrinogenemia. It is not known whether there is a gradual depletion of fibrinogen before the bleeding tendency appears, or whether there is a sudden depletion of this factor through massive intravascular deposition of existing fibrinogen in the form of fibrin.

In 1951, we obtained a supply of human fibrinogen from Dr. Duncan E. Reid and Dr. Louis K. Diamond, of Harvard University. This had been prepared under the auspices of the American Red Cross and was sent to us for emergency trial use in obstetrics, with the provision that we report our clinical results to Dr. Diamond and Dr. Reid. We were warned of the possible infectious hepatitis that might appear later as a result of fibrinogen administration.

Later, through H. B. Anderson and K. B. McCall, the Division of Laboratories, Michigan State Department of Health, Lansing, provided us human fibrinogen for clinical trial under a program that also was sponsored by the American Red Cross.

CASE REPORT NO. 2

Five times in the past four years, we have been called upon to provide fibrinogen—four times for abruptio patients, and once for a fibrinogen depletion associated with the intrauterine death of an Rh positive fetus in an Rh negative mother.

B. S. (C.G.H. 29,146) was Rh negative and had a high Rh antibody titre. Intrauterine death had occurred five weeks before she was admitted to the hospital. She exhibited edema, albuminuria and hypertension on admission. Ecchymotic spots on the forearm appeared when a tourniquet was left on the arm for several minutes. A fresh blood sample clotted poorly after 15 minutes, and incubation of the clot for one hour at body temperature caused the clot to disintegrate. She was given 6 Gm. of human fibrinogen intravenously, and a stable clot resulted. Since the patient had had a previous cesarean section, it was decided that another one should be performed for the removal of the dead fetus and placenta. One hour after the operation, the patient developed shock and died. Pathologic examination of her tissues showed massive intravascular deposition of fibrin.

It is felt that the second cesarean section and the trauma associated with it were the final insults to a very much disturbed physiology. Probably the replacement fibrinogen treatment was inadequate. Blood levels of fibrinogen should have been studied in relation both to diagnosis and to replacement therapy. Our own subsequent experience and that of others has shown that this condition must always be anticipated if the fetus dies in utero and is not delivered for five or six weeks. Repeated tests of the patient's blood should have been made to determine clotting ability. Plasma fibrinogen levels should be obtained if there has been an intrauterine fetal death. There have been no reports of maternal fibrinogenopenia within five weeks of fetal death.

CASE REPORT NO. 3

L. G. (F.A.H.) had a severe pre-eclampsia at term, and came to the hospital with the additional finding of severe abruptio placentae. The membranes were artificially ruptured. The patient bled freely from venous puncture wounds, and afibrinogenemia was demonstrated. Four grams of human fibrinogen were administered intravenously. Pitocin was used in venous infusion of distilled water to stimulate labor. The clotting defect was corrected. The patient delivered a stillborn infant vaginally 13 hours after rupture of the membranes, and made a satisfactory recovery.

The current opinion is that such a patient should be delivered abdominally if vaginal delivery does not occur rather promptly after correction of the afibrinogenemia and after rupture of the membranes.

CASE REPORT NO. 4

J. B. (C.G.H. 42,845) was the one maternal death and the second afibrinogenemia patient in our series of abruptio cases seen at the Colorado General Hospital in the past eight years. The severe abruption of the placenta was a complication of the pre-eclampsia. Complete separation of the placenta was associated with fetal death, profound maternal shock and a demonstrable fibrinogenopenia. Six grams of human fibrinogen and several blood transfusions corrected the fibrin deficiency. The membranes were ruptured artificially, and vaginal delivery occurred eight hours later. The patient's clotting deficiency was corrected, but three months later the patient died of acute adrenal insufficiency secondary to necrosis of the pituitary gland, probably as the result of obstetric shock. The pituitary gland necrosis was found at autopsy examination.

This patient died of complications of the abruptio syndrome that were unrecognized before death. The fibrinogenopenia, however, was corrected during the period of emergency treatment.

CASE REPORT NO. 5

M. G. (G.R.H.) had toxemia of pregnancy, severe abruption of the placenta, fibrinogenopenia and twin stillborn infants. Her clotting difficulty was corrected with 4.5 Gm. of fibrinogen. Cesarean section was performed an hour and a half after fibrinogen had been administered. Artificial rupture of the membranes and pitocin were ineffective. Artificial rupture of the membranes was performed two hours before cesarean operation. The patient recovered.

The fibrinogen deficiency was recognized and treated promptly. The membranes were ruptured to relieve intrauterine pressure and to induce labor, but it did not start promptly, even with pitocin stimulation. In consequence, abdominal hysterotomy was elected, the fibrinolytic process was arrested, and the outcome was satisfactory.

CASE REPORT NO. 6

K. K. (G.R.H.) had had a normal pregnancy until the onset of labor. Then hypertension, albuminuria, severe abruptio placentae and fibrinogenopenia suddenly developed during the course of labor. Obstetrical shock was out of proportion to the blood loss. Immediate blood transfusions and 6 Gm. of fibrinogen were administered. The bleeding tendency seemed controlled, and the patient improved. Three hours after delivery, she underwent a second episode of obstetric shock. She bled from the vagina, and again the blood showed no tendency to clot. Three more grams of fibrinogen were administered, but the patient died within a half hour, four hours after delivery.

Analysis of this death in light of present experience suggests that it might have been preventable. The first symptoms of abruptio placentae occurred 12 hours before death. The patient delivered after seven hours of symptoms, and although the abruptio syndrome was recognized immediately, the fibrinolytic syndrome was not recognized until after delivery. According to our present knowledge of this disease process, it is imperative that one recognize the hypofibrinogenemia early, treat it, and then empty the uterus by cesarean section soon thereafter, if labor does not progress quite rapidly.

CASE REPORT NO. 7

S. L. (C.G.H. 45,726) had an accidental separation of the placenta characterized by continuous abdominal pain, vaginal bleeding and a sudden cessation of fetal movements. Six hours later, when the patient arrived at the hospital, she demonstrated a moderate degree of shock, pre-eclampsia and abruptio placentae. A sample of the patient's blood failed to clot after standing for several hours. Shortly after admission, she delivered a term-sized stillborn infant vaginally. A 1,000 cc. postpartum hemorrhage occurred. She was given three units of whole blood, the clotting defect corrected itself soon after delivery, and she made a satisfactory recovery.

This patient had a severe abruptio placentae syndrome with fibrinogenopenia, and although the symptoms of separation were present for six hours, she recovered. This case tends to show that the disease process may not always be fatal, even though it is not treated with fibrinogen.

Among the seven cases that have been discussed, there were six abruptio placentae patients and one patient carrying a dead fetus in utero who demonstrated fibrinogenopenia. Four of the seven died. Three had adequate fibrinogen replacement, but died of complications of the disease after the clotting defect had been corrected.

Anderson and McCall,[11] through reports made to them at the Michigan State Health Department's fibrinogen bank, have summarized the cases of 131 patients treated with fibrinogen, with 22 deaths. Almost half of those patients were diagnosed as having abruptio placentae, and almost two-thirds of them had conditions associated with pregnancy. Of the 64 abruptio patients reported to them as having been treated with fibrinogen, 60 were said to have responded satisfactorily. Only one of them died from a hemorrhage that failed to respond to the administration of fibrinogen.

Amniotic fluid embolism has been reported as capable of producing sudden afibrinogenemia.[12] Although we have encountered three patients whom we thought to have had amniotic fluid

emboli, we have seen none with afibrinogenemia that occurred as a result of a recognized amniotic fluid embolus. Any prolonged intrauterine fetal death might conceivably lead to afibrinogenemia. When an intrauterine fetal death is known to have occurred as long as 35 or 40 days before examination, the patient's blood should be checked for fibrinogen depletion.

Cutter Laboratories recently produced a purified human fibrinogen that is now available for the treatment of hypofibrinogenemia. It is prepared in 1 Gm. packages, complete with diluent and administration set. This product, marketed under the trade name Parenogen, is still quite expensive. It is safe and effective, according to our present knowledge.

It is difficult to give a set plan or advice for the management of the serious obstetric complication of fibrinogenopenia. When the condition appears, it is necessary for one to make the diagnosis as early in the disease process as possible. Not only abruptio placentae, amniotic fluid embolus and fetal death in utero, but also abortion,[13] retained placenta[14] and eclampsia[15] have been associated with varying degrees of hypofibrinogenemia. The plasma fibrinogen level in a normally pregnant patient at term is about 400 mg./100 ml.[16] When plasma fibrinogen levels are found materially below 400 mg., and certainly when such levels reach 100 mg. or lower, a hemorrhagic diathesis from fibrinogenopenia can be anticipated.[17] It is our opinion that when one is dealing with a potential candidate for hypofibrinogenemia, one should perform repeated plasma determinations for fibrinogen.

If present, the clotting deficiency or hypofibrinogenemia should be corrected through the administration of 2 to 6 Gm. of human fibrinogen. Whole blood must be used in quantities sufficient to replace blood loss and to combat shock, if active bleeding has occurred. When the patient's condition is satisfactory, the uterus should be emptied by the method that is most atraumatic and most expedient for the given patient. For some, cesarean section may be best; for others, rupture of the membranes and pitocin stimulation of uterine activity may be most beneficial. Until the uterus is emptied, the threat of fibrinogenopenia persists, and the more extensive the process of placental separation, the greater the amount of thromboplastin released to the general circulation. Artificial rupture of the membranes may reduce the amount of thromboplastin being liberated from the placental site, and will hasten the process of labor.

SUMMARY

Eight years' experience with abruptio placentae and fibrinogenopenia at the Colorado General Hospital has been reviewed. During this period, 70 patients with varying degrees of accidental separation of the placenta were seen. Two of the 70 had fibrinogenopenia as an added complication. Histories of five other patients who had fibrinogenopenia and who were seen outside of the Colorado General Hospital have been presented and discussed. The causes and management of fibrinogenopenia have been reviewed.

CONCLUSIONS

1. The fetal mortality in abruptio placentae, including all degrees of placental separation, was 33 per cent.

2. The fetal mortality is influenced by the severity of the abruptio syndrome and by the prematurity of the infant.

3. Cesarean section was used in only 4 patients (6 per cent) of the 70 who had abruptio placentae.

4. Fibrinogenopenia occurred in 2 of the 70 patients.

5. There was one maternal death in the entire group of abruptio placentae patients.

6. All patients with moderate and severe degrees of abruptio placentae should be studied for fibrinogen deficiency. If the deficiency is present, it should be corrected with sufficient quantities of intravenous human fibrinogen. Delivery should be accomplished soon thereafter.

BIBLIOGRAPHY

1. Howard, B. K., and Goodson, J. H.: Experimental placental abruption. Obst. & Gynec., **2**:442-446, (Nov.) 1953.
2. Mengert, W. F., Goodson, J. H., Campbell, R. G., and Haynes, D. M.: Observations on pathogenesis of premature separation of normally implanted placenta. Am. J. Obst. & Gynec., **66**:1104-1112, (Nov.) 1953.
3. Caldeyro-Barcia, R.: Comment on a paper. Am. J. Obst. & Gynec., **66**:1111, (Nov.) 1953.
4. Bartholomew, R. A., Colvin, E. D., Grimes, W. H., Fish, J. S., and Lester, W. M.: Mechanisms of bleeding during pregnancy. Am. J. Obst. & Gynec., **66**:1042-1061, (Nov.) 1953.
5. Barry, A. P., and Geoghegan, F.: Accidental hemorrhage: abruptio placenta. Irish J. Med. Science, **6**:189-204, (May) 1954.
6. Sheehan, H. L., and Moore, H. O.: Renal Cortical Necrosis and the Kidney of Concealed Accidental Hemorrhage. Springfield, Illinois, Charles C Thomas, 1953.
7. Weiner, A. E., Reid, D. E., and Roby, C. C.: Incoagulable blood in severe premature separation of placenta; method of management. Am. J. Obst. & Gynec., **66**:475-499, (Sept.) 1953.
8. Page, E. W., King, E. B., and Merrill, J. A.: Abruptio placentae. Obst. & Gynec., **3**:385-393, (Apr.) 1954.
9. DeLee, J. B.: Case of fatal hemorrhagic diathesis, with premature detachment of placenta. Am. J. Obst. & Dis. Women and Children, **44**:785-792, (Dec.) 1901.
10. Kellogg, F. S.: Treatment of toxemia of pregnancy. M. Clin. North America, **31**:1192-1204, (Sept.) 1947.
11. Anderson, H. D., McCall, K. B., and Hertell, J. A.: Preparation and clinical use of dried fibrinogen (human) for intravenous use. (Scheduled for publication in the American Journal of Clinical Pathology.)
12. Reid, D. E., Weiner, A. E., and Roby, C. C.: Intravascular clotting and afibrinogenemia, presumptive lethal factors in syndrome of amniotic fluid embolism. Am. J. Obst. & Gynec., **66**:465-474, (Sept.) 1953.
13. Conley, C. L., Ratnoff, O. D., and Hartmann, R. C.: Studies on afibrinogenemia: I. Afibrinogenemia in patient with septic abortion, acute yellow atrophy of liver, and bacteremia due to E. Coli. Bull. Johns Hopkins Hosp., **88**: 402-413, (May) 1951.
14. Maisel, F. J., Cartnick, E. N., and Zaino, E. C.: Afibrinogenemia: its occurrence in two patients with late postpartum hemorrhage. Obst. & Gynec., **3**:204-209, (Feb.) 1954.
15. Dillon, W. F., and Schmitz, H. E.: Fulminating eclampsia associated with fibrinogenopenia and hemorrhage. Illinois M. J., **96**:255-259, (Oct.) 1949.
16. Dieckmann, W. J.: Toxemias of Pregnancy. St. Louis, C. V. Mosby Co., 1941.
17. Jackson, D. P., Hartmann, R. C., and Busby, T.: Fibrinogenopenia complicating pregnancy. Obst. & Gynec., **5**:223-247, (Mar.) 1955.

The Current Therapy of Essential Hypertension

IRVING J. HANSSMANN, M.D.

COUNCIL BLUFFS

THIS PAPER WILL deal with therapy for that type of arterial hypertension known as "essential," as distinguished from that which is secondary to known causes. Since the causes are unknown and since, from clinical and experimental evidence, it is highly probable that there are many of them—neurogenic, renal and hormonal ones, and perhaps others—there is at present no single drug which will cure it. For that reason, and since most clinicians agree that hypertension existing for any considerable period of time produces vascular injury and ultimate organ damage, it seems logical that our current approach should be aimed at preventing or postponing organ damage through a lowering of blood pressure thus reducing vascular stress.

There once was considerable lack of agreement among clinicians and among research workers as regards the necessity for treating most hypertension patients, for the disease appeared frequently to run a benign course for long periods of time. In addition, there was some doubt of the utility of treatment, for such drugs as were available until a short time ago were relatively short-acting and ineffective. But altogether credible ten-year follow-up studies revealed a considerable mortality among those so-called "benign" cases, and published reports following sympathectomy for hypertension constituted a rather effective answer to those who opposed vigorous treatment, for they indicated that the surgical method of reducing blood pressure achieved more effective and lasting results than did such drugs as were available when those reports were written.

CLASSIFICATION OF CASES

In an effort to answer the questions of which cases to treat and how intensively to treat them, Freis has suggested setting up three categories, mild, moderate and severe, on the basis of the following factors: age, level of blood pressure, variability or lability of blood pressure, condition of the optic fundi, status of heart, degree of impairment of kidney function, and condition of central nervous system (Table 1).

The mild group consists of patients over 45 years of age with blood pressure levels below 220/120. Pressures are variable, and many are close to normal. The heart, kidneys and central nervous system show no evidence of impairment. The moderately severe group includes patients below 40 with blood pressures over 150/90 and all over 45 with blood pressures over 220/120. Pressures are more frequently fixed at a high level in this group. The fundi show grade 1-2 changes, the heart shows some enlargement, and the EKG reveals some left ventricular hypertrophy. Evidence of mild kidney damage is present in the form of albumin, red blood cells and casts. There may even be a history of a previous cerebral accident, with damage to the central nervous system. In the severe group, blood pressures are all over 220/120. Any age may be represented, but the younger patients have the more severe disease. The pressures here are fixed and continuously high, with very little tendency toward normal at any time. The optic fundi show changes of grades 2-4. Their electrocardiograms reveal left ventricular hypertrophy. The heart is large, and there may be evidence of congestive heart failure. The urine shows a fixed specific gravity and loss of concentrating power, and often there is an elevation of the N.P.N. The central nervous system has been damaged by previous cerebral accidents and encephalopathic episodes. By means of such a classification of cases, the need for treatment and the intensity of treatment can be determined.

Since the potency and the effectiveness of present day drugs cannot be utilized without one's paying the price in side effects, and since, in general, the more potent the drug the more severe the side effects, it becomes important that we use the milder drugs for the milder cases, and reserve the more potent ones for the more severe or rapidly progressive cases. Another factor to be borne in mind is that the hypotensive effect is obtained by a variety of pharmacologic means with the different drugs. This circumstance gives rise to the principle of using combinations of two or more of them to obtain additive hypotensive effects. The operation of these general principles will be developed as the various drugs are considered.

TREATMENT OF THE MILD HYPERTENSIVE

About 80 per cent of all hypertension falls into the mild group, the so-called benign hypertension. Most observers agree that this group needs very little in the way of vigorous treatment. Our chief aim here should be to keep these patients under observation in order to reevaluate their disease at regular intervals. We should reassure them by

pointing out that there are many varieties of hypertension and that they, fortunately, have no more than mild cases. Nevertheless, patients should also be told that continued observation is necessary. They should be counselled on the desirability of their relaxing and of their avoiding situations that produce stress, worry and anxiety, since those are the things that aggravate hypertension. In regard to drug therapy for mild hypertensives, phenobarbital in small doses is often quite satisfactory. The Rauwolfia preparations are somewhat better for some people, in that they seem to exert a greater hypotensive action and to produce the necessary relaxation without excessive sleepiness.

The pharmacology of the Rauwolfia preparations is incompletely understood at the present time. However, the drug appears to inhibit the sympathetic division of the autonomic nervous system, lowering the blood pressure and, also, producing the side effect of nasal stuffiness. In addition, it stimulates the parasympathetic, producing, in turn, a slow pulse and an increase in gastrointestinal motility. Aside from this, it seems to affect the hypothalamus, resulting in an increase in appetite and a tendency to gain weight, plus a feeling of relaxation that extends, at times, to the point of depression.

Although this drug is obtainable either as the whole powdered root or as partially purified alkaloids, the purified crystalline alkaloid reserpine is the preferred form for administration. The drug is slowly absorbed. It is given for about two weeks in the full dosage of approximately 1 mg. to 1.5 mg. daily. When the effects become manifest, the dosage may be dropped to one-half or one-third of the original amount. The side effect of nasal stuffiness is said to be overcome by antihistaminics, but in our experience, this is not always true. In rare instances, a patient becomes too depressed to continue with the medication, but in general the side effects are mild, and a moderate, sustained drop in blood pressure is secured in cases that are not too severe.

TREATMENT OF THE MODERATELY SEVERE GROUP

Rauwolfia is the drug of choice for the mild group, but it may also be employed in an initial effort at treating moderately severe cases. In most of this group of patients, however, Rauwolfia does not reduce pressure to desirable levels. In such cases, it may be combined successfully with veratrum, hydralazine or ganglion-blocking agents. The decision as to which of these three is to be added is almost empiric, since each has certain advantages and certain disadvantages in the form of side effects.

We shall consider veratrum first. The pharmacologic action of this drug is mediated through stimulation of receptors in the carotid sinus, carotid body and aorta. These, in turn, send afferent impulses to the vasomotor center, resulting in vasodilation and lowered blood pressure. This is accompanied usually by bradycardia. Unfortunately, it also stimulates the vomiting center and causes salivation, nausea, vomiting and some epigastric pain.

This drug is available either in the whole powdered leaf or in various ester alkaloids. The pure alkaloids, protoveratrine A & B and a more recent one, cryptenamine, have been more used recently than have the cruder drugs and mixtures. Though it is claimed that the margin between therapeutic effectiveness and the side effects of nausea and vomiting is greater with the purified alkaloids, practice frequently demonstrates otherwise. Nearly all have a narrow margin between therapeutic and toxic effects. Parenteral forms of these medications are available for use in the hypertensive crises of toxemia and encephalopathy. If used in this manner, they should be used with caution, and the manufacturers' instructions should be followed

TABLE 1

ESSENTIAL HYPERTENSION

	Mild	*Moderate*	*Severe*
Age	Over 45 years	Any age	Any age, but more severe in younger patients
Blood pressure			
Level	(casual) 220/120 or below	Below 45 years: 150/90 Above 45 years: 220/120	Over 220/120
Variability	Variable	More continuously high	Fixed and continuously high
Optic fundi	Grade 0-1	Grade 1-2	Grade 2-4
E.K.G.	Normal	May show left ventricular hypertrophy	Left ventricular hypertrophy
Heart	No enlargement	Moderately enlarged; possible mild congestive failure	Definitely enlarged; congestive heart failure
Urine	Normal; sp. g. 1.020	Albumin, red blood cells, casts, white blood cells	Fixed specific gravity; albumin, casts, red blood cells; often elevated NPN
Cerebral	Negative	Possible history of cerebrovascular accident	Encephalopathies; previous cerebrovascular accident

carefully so that excessive and dangerous overdosage may be avoided.

The oral route is preferred in the treatment of chronic hypertension. The side effects are lessened if one also uses one of the Rauwolfia preparations. One may start with one tablet of any of the preparations after breakfast, one at mid-afternoon and one at bedtime. It is important in using this drug that the patient should not take food for about four hours after a dose, since the taking of food sooner than that aggravates the nausea and vomiting. If no drop in blood pressure occurs, one should gradually add one tablet to each dose every two or three days until a drop in blood pressure occurs, or until some toxic symptoms make their appearance. According to Freis, only about 25 per cent of patients are benefited by veratrum.

If one is forced to discontinue veratrum because it has proved ineffective, one may next try hydralazine. If this drug is used, it is very definitely advantageous that one prepare the patient with Rauwolfia and that he continue it in maintenance doses as a means of decreasing the unpleasant side effects of hydralazine. Even with this precaution, it is sometimes difficult for the physician to get patients to accept hydralazine.

The pharmacology of this drug too is incompletely understood. It is said to have a weak, anti-adrenergic effect and a central and peripheral hypotensive action. It is also said to neutralize certain pressor substances. Many observers feel that it is simply a peripheral vasodilator, rather similar to, but longer acting, than the nitrates. In addition to its hypotensive effects, it also produces a slight increase in cardiac output, a tachycardia and an increase in renal blood flow. In addition, it causes very severe headaches. The tachycardia is partially nullified by the action of Rauwolfia, which causes bradycardia.

This drug should be started in doses of 10 mg. or 25 mg. four times daily and should be gradually increased until a therapeutic effect is obtained. Doses should not exceed 500 mg. daily, since arthritis and a syndrome resembling lupus erythematosis has been reported when patients have been on these larger doses for prolonged periods. Tolerance also develops when administration has been carried on too long. It is contraindicated in cases of coronary disease or congestive heart failure. Furthermore, cases of bone marrow depression, with leucopenia, have also been reported. This drug may be used in combination with veratrum and Rauwolfia, or in combination with hexamethonium.

In moderately severe hypertension, one can then try one of these drugs, or combination of any two, or all three. Each case must be individualized because of the variable response of different people to the different drugs.

TREATMENT OF SEVERE HYPERTENSIVES

Early malignant hypertensives and severe chronic cases which prove refractory to the previous program, are proper candidates for treatment with ganglion-blocking agents, either alone or in combination with one or more of the medications previously described. Until recently, hexamethonium was the most acceptable of the ganglion-blocking agents. In addition to the disadvantageous side effects that ganglion-blocking agents have in common, however, hexamethonium is poorly absorbed from the gastrointestinal tract, has a marked variability of absorption and has an unpredictable duration of action. Parenteral administration proved more reliable, but an effective dosage produced an hour of more of severe postural hypotension following each administration. Development of tolerance was another problem with this drug. The release, this year, of pentapyrrolidinium under the trade name Ansolysen has overcome some of these disadvantages. Ansolysen appears to produce more predictable blood pressure responses on oral administration. It also produces less severe intestinal atony and may have a somewhat longer duration than hexamethonium. In addition, smaller doses achieve an adequate reduction of blood pressure. Because of those advantages, one gets the impression that this drug will shortly be the medication of choice among the ganglion-blocking agents. On the other hand. It has all of the side effects and dangers of the other ganglion blocks. The use of any of these drugs necessitates a complete understanding of their pharmacology.

The pharmacologic action of the ganglion-blocking agents is a blockade of both sympathetic and parasympathetic ganglia. The principal hypotensive effects are mediated by the blockade of the vasoconstrictor impulses in the sympathetic nervous system. The decrease in blood pressure is greater when the patient is upright than when he is recumbent. The side effects include blurring of vision, dryness of mouth, weakness, constipation (which may progress to ileus), paralysis of the bladder and impotence. Because it is through the kidney that it is excreted, impaired kidney function that causes retention even of small doses will produce cumulative effects. Vascular thrombosis in the brain and heart and renal insufficiency have occurred in cases in which the blood pressure has been lowered too rapidly by the administration of this drug. Consequently, the patient's heart and kidney status must be thoroughly investigated before treatment is started.

After such a recitation of dire side effects, one might almost decide not to use any of these medications at all. But the alternative might be the patient's death or severe disability from hypertension! If one is to secure good results, he must give the patient certain specific instructions. One must warn him against prolonged standing. He must, by all means, have a bowel movement every day. He probably should not drive a car. He should be made aware that alcoholic beverages accentuate postural hypotension and that excessively hot weather may also cause an accentuation. And he

should be reminded repeatedly of the necessity for frequent checks on his kidney function and blood pressure. Patients with uremia, cerebral thrombosis or coronary thrombosis should not be treated with this drug.

As regards the dosage of Ansolysen, it is well to start with small oral doses of 20 to 40 mg. at eight-hour intervals. In order not to interfere with the patient's sleep, the doses are given early in the morning, in mid-afternoon and at bedtime. Blood pressure should be checked when the patient is standing and when he is recumbent. The aim should be to produce the lowest possible blood pressure in the standing position, without causing any feelings of faintness or syncope. To accomplish that objective, one can increase the doses 20 mg. each on every second or third day. If significant reduction does not occur before annoying symptoms arise, hydralazine can be added gradually. Hydralazine will affect the recumbent pressure, whereas Ansolysen is more effective in reducing pressure in the erect posture. In the presence of ganglion-blocking agents, hydralazine is much better tolerated. If constipation becomes a problem, the addition of pilocarpine or oral prostigmine may overcome the difficulty. It is important that adequate follow-up be maintained even after an apparently proper dosage schedule has been reached, for tolerance develops and may necessitate changes in dosage from time to time.

In regard to combined drug therapy, it might be mentioned that pharmaceutical houses are becoming aware of the trend in that direction and are now marketing combinations in single-tablet form. From the preceding discussion, however, it must be apparent that their helpfulness in that regard is quite misguided. The response to these drugs in different individuals is markedly variable, and in order to get the proper dose of one substance, one may have to prescribe tablets that contain twice the optimal dose of another substance. Rather, it is preferable for one to explore the possibilities of one drug completely, and then gradually add the effective amount of a second, and, if necessary, of a third.

SYMPATHECTOMY

No paper on the treatment of hypertension could be considered complete if it did not mention sympathectomy. Since the advent of the drugs discussed, sympathectomy has received less emphasis. It is, nevertheless, still a useful procedure. It should be seriously considered as an initial step in the young, rapidly progressive hypertensive, especially if the patient is inclined to be uncooperative and impatient. It should also be considered at an early date if medical measures seem unlikely to produce adequate response, and before the patient has progressed to the point at which he is a poor surgical risk. In favor of sympathectomy, it must be said that statistical evidence indicates that it decreases mortality. It also is a procedure that eliminates the necessity for maintaining the patient's cooperation. He must, of course, be persuaded to undergo the operation, but afterward a great deal less depends upon his willingness to follow his doctor's orders explicitly.

It is true that there are failures after sympathectomy, as well as after medical treatment. But the employment of medications following surgery is now decreasing even that failure rate. The newer drugs have been shown to be more effective after sympathectomy than before it. Thus, paradoxically, some previous medical failures have become successes through the addition of surgery.

In conclusion, it may be stated that although the etiology of essential hypertension is still unknown, great improvements have been made in our ability to obtain effective and sustained reductions in blood pressure. This, in turn, has added to life expectancy and has prevented elevated blood pressure from damaging organs.

SUMMARY

The principles of the current drug therapy of hypertension have been summarized. The pharmacologic actions of Rauwolfia, veratrum, hydralazine and the ganglion-blocking agents have been commented upon. Details of combination therapy have been discussed.

REFERENCES

1. Freis, E. D.: Recent developments in treatment of hypertension. M. Clin. North America, **38**:363-374, (Mar.) 1954.
2. Freis, E. D., *et al.*: Clinical appraisal of pentapyrrolidinium (M & B 2050) in hypertensive patients. Circulation, **9**: 540-546, (Apr.) 1954.
3. Hoobler, S. W.: Treatment of hypertension. Am. J. Med., **17**:259-270, (Aug.) 1954.
4. Smirk, F. H.: Practical details of treatment of hypertension by hexamethonium salts and by pentamethylene 1:5-bis-N-Bitartrate. New Zealand M. J., **52**:325-348, (Oct.) 1953.
5. Smirk, F. H., Doyle, A. E., and McQueen, E. G.: Control of blood pressure by combined action of reserpine and pentapyrrolidinium. Lancet., **2**:159-162, (July 24) 1954.
6. Smithwick, R. H., and Thompson, J. E.: Splanchnicectomy for essential hypertension. J.A.M.A., **152**:1501-1504, (Aug. 15) 1953.

OBSTETRICS FOR GENERAL PHYSICIANS

The University of Minnesota will present a course in obstetrics for general physicians at the Center for Continuation Study on its Minneapolis campus January 5-7, 1956. The course will be under the direction of Dr. John L. McKelvey, head of the Department of Obstetrics and Gynecology.

OBSTETRICS SHORT COURSE

The second annual winter obstetrical conference at the University of Nebraska College of Medicine, on January 19 and 20, will stress toxemia of pregnancy, including some of the technical aspects of electrolyte balance and the effects of aldosterone. Dr. Robert Willson, chairman of the Department of Obstetrics and Gynecology at Temple University, and Dr. Arthur Hunt, of the Mayo Clinic, are among the nationally known authorities who will take part.

Suicide and the Physician

PAUL M. KERSTEN, M.D.

FORT DODGE

SUICIDE, TOGETHER with the many problems that it presents, has always occupied the minds of sociologists and of physicians, especially psychiatrists. It is a medical problem which, as physicians, we cannot overlook. As guardians of the lives, health and welfare of our patients, we are directly responsible for protecting them from themselves. And our efforts of that sort can accomplish a great deal. We can do much to diminish the incidence of self-inflicted death.

In the literature, there has been considerable debate over the supposition that every suicide or suicidal attempt represents a symptom of a serious underlying personality or emotional problem. From the psychiatric point of view, there can be no question that, by and large, the turning of one's hostility onto oneself for voluntary and intentional self-destruction is a manifestation of illness. In such instances, a pathologic state has resulted when the will to live has been overwhelmed by the desire to die.

It is the position of the medical profession and of the legal profession as well that such self-destructive acts are symptoms of underlying sickness, but there still are some states whose laws make them punishable offenses, though nowadays they are rarely, if ever, made the basis of criminal charges. In England, an attempt is made to differentiate between a person who has attempted suicide in a "sound state of mind" and the one who makes such an attempt while in an "unsound state of mind."[1] If it can be established that the former situation prevailed, then he or his estate is subject to penalties.

Over the world, social attitudes toward suicide vary greatly. The major religions, such as Christianity, Mohammedanism and Judaism, condemn it. That prohibition, along with strong taboos against such an act, has a significant role in controlling self-destructive impulses. Ireland, having a closely knit culture in which there are tightly held social and religious traditions, has the lowest suicide rate in the world. Surprisingly enough, Japan has a lower suicide rate than do the countries of mid-Europe, even though self-destruction is not forbidden in the Japanese culture.[1] Austria, Czechoslovakia, Germany, Hungary and Switzerland have the highest rates of suicide in the world.

Professor Walter A. Lunden, a social scientist, has said, "The number of suicides in a country depends on the degree and character of the vicissitudes experienced in the population and on the stability of the people."[2] He goes on to say that in those western countries where social conditions are favorable, life secure, customs unbroken and traditional institutions intact, suicides are relatively rare. When wars, unemployment, depressions and other sudden disorders change the conventional life of citizens, men and women lose the will to live, and suicides increase. The will to live is dependent on the degree to which people possess well integrated personalities and a certain "reverence" for life, he thinks. Economic well being is important, but it is not the sole basis for stability, for a certain amount of prosperity may lead to boredom and a feeling of uselessness. Conversely, people living under adverse conditions may be sustained by competition or even struggle for life and by idealism or religion to such a degree that few suicides occur, despite chronic food shortages and a generally bad state of health. The number of suicides in a country, he concludes, reflects either balance or imbalance between the forces which make for social security and those that make for insecurity.

To Professor Lunden's statements, I should like to add that there are some other important factors, among them the relative degree of personality integration and strength in the individuals of a particular culture, plus certain inherited traits not as yet clearly understood.

AMERICAN SUICIDE RATES

In our own country, suicide, year in and year out, is between the ninth and eleventh principal cause of death. There is some variance from state to state, California having a suicide death rate almost two times that of any other.[3] In Iowa, suicide ranks tenth as a cause of death. Mr. L. E. Chancellor, director of the Division of Vital Statistics in the Iowa State Department of Health, reports that though the death rates from other causes have decreased over the years, that from suicide has merely fluctuated.[4] After 1939, the suicide rate decreased to a low in 1943 for both males and females. Then in 1945 and 1946, after the war, it rose again.

I might say parenthetically that it is interesting how regularly one finds that a country's suicide rate declines after war has been declared. This is particularly true in nations which are actively engaged in an aggressive conflict and in those which are engaged in a successful defensive struggle. The converse is also true, that the suicide

Dr. Kersten, of the Section of Psychiatry at the Kersten Clinic, read this paper at a staff meeting of Lutheran Hospital, Fort Dodge.

rate increases when the country has been defeated. From the psychiatric point of view these phenomena can be explained on the grounds that those engaging successfully in battle have a clearly defined and tangible target for their individual and collective hostilities, they can therefore externalize their antagonisms effectively, and they have little need to use themselves as targets for their animosities.

Returning to our comparison of Iowa death rates, I should like to point out that according to Mr. Chancellor, 1945 was the first year in which fewer Iowans died from tuberculosis than from suicide, and in 1953 the tuberculosis death rate had declined so far that no more than half as many died from that disease as took their own lives. Seven times as many people die of suicide as died from rheumatic fever; nine times as many of suicide as of poliomyelitis. We are all aware of the alarming death rate from automobile accidents. Yet few of us are cognizant of the fact that in Iowa, during 1953, half as many people destroyed themselves as were killed on the highways. Of course it is by no means certain that those two groups of fatalities are mutually exclusive. Indeed there seems no doubt that many so-called "highway accidents" are unsubstantiated suicides.

Startling as these figures are, they are at best no more than gross indicators of the size of the problem of suicide. As Mr. Chancellor has said, "Statistics on this subject are not as reliable as they should be for many reasons. Uppermost in our minds is the fact that in many local areas a hometown physician or coroner will frequently list a death as accidental when it should be suicide. Certainly this is true where there is any question at all in the matter."[5] The shame, guilt and embarrassment that would otherwise afflict the surviving members of the family are undoubtedly important in making a family doctor report unattended deaths as accidental.

Though it is regrettable that in cases of successful suicide the survivors put some pressure upon the doctor to cover up the true cause of death, it is even more regretable that the families of unsuccessfully or just potentially suicidal patients neglect to tell him what they know of the individual's inclinations in that direction or refuse to think seriously of them. We as physicians can do much in the way of educating our patients and their families to the fact that suicidal acts are symptoms of illness which, like any other illness, can be understood and treated if proper help is obtained early enough. If we are to function as the true physicians that we aspire to be, our own attitudes in this regard are most important. Later, I shall develop some aspects of the importance of that attitude of the physician.

It has been estimated that over the world there are approximately 310,000 suicides every year.[6] For every death from suicide in our own country, there are at least five unsuccessful attempts. Since there are 30,000 known suicides in this country annually, there must be no fewer than 150,000 unsuccessful attempts. The successful suicide and the unsuccessful attempt both are acts of sickness. They should be considered as symptoms of an underlying personality disturbance—symptoms of emotional illness. If we recognize that fact clearly, we can do much in the area of preventive medicine as concerns this large and important cause of death. Adequate psychiatric treatment can be given to patients who have unsuccessfully attempted suicide but we physicians must recognize the signs and symptoms of psychologic illness in such an act. If we do so, we can prevent potentially suicidal patients from destroying themselves.

Every psychiatric entity has its suicide rate. Self destruction can occur in any type of psychiatric illness at any age, and it is no respecter of person or sex. It is true that the highest incidence of suicide occurs in the 50-65-year age group, but that fact is no more than a reflection in statistics of the fact that every person with a depression is a potential suicide. Of course by no means every depressed patient attempts suicide or even contemplates it, but the 50-65-year age group is most prone to the emotional illness which is spoken of as involutional melancholia[7] and which has a very high suicidal risk.

WHAT THE PHYSICIAN CAN DO

There really is a great deal that the average physician can do about this problem. First of all, he can keep constantly aware of the possibility of suicide in each of his emotionally disturbed patients. By the very nature of his humanness, every individual has the potentiality of turning his hostility and destructiveness upon himself. Few emotionally disturbed patients spontaneously divulge their suicidal preoccupations. Yet, in response to tactful and understanding questioning, a high percentage of them will confide to their doctors the fact that they fear they may injure themselves. After the physician has established a comfortable relationship with each of his patients who appear seriously disturbed, he should ask, "Are you troubled by disturbing thoughts?" And if the answer is affirmative, he should then ask, "Have you been troubled by the thought that you might harm yourself?" If the patient answers "Yes" to that second question, too, the physician must try to give him some temporary psychological support. A statement such as the following will ally the physician with the most mature and healthy aspect of his troubled patient: "I can understand how disturbing such thoughts must be to you, but I am sure there is another part of you which does not want harm for you at all." At this point, the physician is in a good

position to stress the fact that these thoughts are symptoms of an emotional illness and to tell the patient that help is available to him in the form of psychiatric evaluation and subsequent treatment. Tactful inquiries and reassurances of these sorts should be a part of the examination given to every patient in whom suicidal preoccupation and planning are suspected.

It is most important for the physician to give serious regard to information that he has elicited from his patients through questionings such as that which I have just described. There is a common misconception that those who talk about suicide never commit it. On the contrary, approximately one-third of those who are successful in taking their own lives have made their intentions known previously. It is true that such verbalizations on the part of a patient may be a threat directed against those in his immediate environment. On the other hand, they are at the same time a disguised request for help. All such material given the physician constitutes important clinical data and should always be considered so.

Many patients, regardless of their basic psychiatric condition, feel ashamed and guilty over the disturbing impulses of which they are aware. Often in desperation, they turn for help to their physician as the only really understanding friend they have left in the world. Many are able to verbalize their problem directly. Many more can do so only in disguised and indirect ways. And more yet will talk of their psychological trouble only through expressions concerning their disturbed bodily function. The physician's attitude as he evaluates such a problem is important. If he is hostile, critical or judgmental, the patient may think he is unwilling to listen and to give him assistance, and that sort of impression may unbalance his tenuous control. Such a rejecting attitude on the part of the physician will only deter the potentially suicidal patient from discussing the real trouble in his life—the trouble he is experiencing with his self-destructive impulses. On the other hand, if the physician can acknowledge the existence of such a difficulty and evaluate the patient's symptoms carefully and with understanding, he can go a long way toward supporting the healthier aspect of the patient's disturbed personality.

Sometimes when we are confronted with an attempted suicide, we detect within ourselves a rising tide of anger directed toward the patient. It may reach our awareness in the form of a clear-cut hostile thought toward the sick person, or it may be expressed indirectly in the form of indifference toward his situation. Often, even after a suicide attempt, a conscientious physician who has cared completely for the physical needs of the patient discharges him when he is on the road to physical recovery. Without the physician's being aware of it, this can be a form of indifference to the total needs of the patient, for the doctor has overlooked the basic pathology which became apparent in the symptom of self-destructiveness.

There are many substantiated instances in which a well intentioned physician has later regretted his attempt to "joke" a patient out of his disturbing thoughts. Such indifference on the part of the physician to the true meaning of the symptoms is interpreted by the patient as a rejection by the last person whom he could trust. This can be a devastating blow, and oftentimes is the opening chink in an already weakened defense against a flood of self-destructive impulses.

The physician has a bilateral role in the care of a patient who has attempted suicide. First, it is important that he care for the individual's immediate physical needs. Secondly, it is equally important that he evaluate the patient's psychological needs and do everything possible to see that he gets the psychiatric help that is indicated. This dual task can be difficult to perform, for it entails an evaluation of the seriousness of the attempt at suicide. The physician's ability to function adequately in this situation will depend largely upon the quality and strength of the physician-patient relationship that he has established. Oftentimes a period of study in a psychiatric hospital is necessary, particularly when the physician suspects that the patient has remained actively suicidal. At least in some areas such as England, to be remiss in either of these two respects is to be guilty of malpractice.[8]

In his effort to evaluate the seriousness of a suicidal attempt, the physician is to be guided more by his own clinical judgment of the total situation and less by the comments of the patient. Certainly it is a mistake for him to take his patients' word that no further attempts will ensue, for although a patient's admission of intent to kill himself should always be considered meaningful, his denial of intent, especially after he has once attempted suicide, should be discounted. A good rule to follow in this regard is to be conservative—to consider each suicidal gesture as a bona fide attempt. Even though the attempt may seem to have been feeble and poorly executed, one should not assume that it was no more than a gesture. Many patients are so confused or so depressed that a feeble attempt represents the maximum integrated effort of which they were capable at the time. A history of previous attempts and physical evidence in the form of suspicious scars can be helpful to the doctor in his efforts to estimate the seriousness of a present attempt.

It often happens that statements from relatives and close friends are not significantly helpful to the doctor in his evaluation of a given situation. Unfortunately, the patient's family is prone to deny the gravity of the situation or to gloss over

its true significance, though they may ultimately have occasion to regret this blindness or false pride. Here, too, the physician has to be guided by his own clinical impression of the total social situation of his patient. The quality of the relationship which he has built up with the patient's family will be his most valuable tool. If there is any question in his mind that the problem at hand represents a serious attempt at suicide, psychiatric evaluation and treatment are mandatory.

In order for us to perform our function in the prevention of death, especially death from suicide, we must keep aware at all times that it can happen to any of our patients. In many instances we shall find ourselves helpless. I am referring to the impulsive suicide, which is usually seen in youth and early adulthood. Our efforts at prevention will be most fruitful if we recognize early the signs and symptoms of depression, particularly depressions during the involutional phase of life. Any patient, especially one in the involutional or pre-involutional period of life, who shows a mood change in the direction of depression is a potential suicide. If the mood change is accompanied by insomnia and agitation, the risk is increased. Oftentimes, these patients describe marked feelings of tension and restlessness. At times they wring their hands, pace the floor and express ideas of self-depreciation, guilt and worthlessness. These symptoms make up the classical picture of agitated involutional depression. It is this entity, occurring in the age span between 50 and 65, which has the highest suicide rate. When such a patient is in the profound depths of depression, he is less likely to be self-destructive than when he is going into or coming out of it. This is small consolation, however, for all such patients must be considered potentially suicidal and must be treated as such.

A variant of the above clinical picture is that seen in a masked involutional depression. Patients of this sort show varying degrees of depression and complain bitterly of a variety of somatic difficulties that have little or no organic basis. They are expressing somatic delusions, and the physician does well to recognize them as such and to establish an adequate treatment plan, including psychiatric evaluation and, frequently, hospitalization. Again it is important that the physician consider suicide as a possibility while he studies patients. People who express fears of hurting themselves or others should not be treated lightly. As has been mentioned before, these complaints made to the family physician should be interpreted as pleas for help. In such a situation, psychiatric help is clearly indicated. This is particularly true when the patient has made previous attempts at self-destruction.

MANAGEMENT OF THE SERIOUS SUICIDAL RISK

What should the physician do when he suspects that his patient is a serious suicidal risk? First of all, it is necessary for him to keep the patient under direct and close observation at all times while he arranges for psychiatric evaluation or for transfer to a psychiatric hospital for evaluation and treatment. It will be necessary for him to enlist the aid of family, friends, nurses and hospital aides in this thorough watchfulness. It is very important that these people have instruction as to the importance of their role. Many patients attempt suicide while awaiting transfer to a suitable hospital for definitive treatment. Many physicians are reluctant to recommend hospitalization and treatment in a psychiatric facility for their patients. It is important in this regard that the physician realize that such a recommendation is not a hostile act on his part, but instead is an act of mercy which oftentimes can save a life and certainly in the case of involutional depressions can, in a very high percentage of cases, lead to a complete reestablishment of the previous level of adjustment for the patient. Of all psychiatric conditions, that of involutional depression has the best prognosis.

Besides maintaining the necessary vigilance, the doctor should see to it that all objects that could be used self-destructively are removed from the patient's immediate environment. These include knives, razors, razor blades, belts, ties, scissors, nail files, radios, pictures and glass objects. If the patient is in a general hospital, he should be in a single room as close to ground level as possible, and each of his activities must be closely supervised. Again, this complete type of watchfulness demands, first, that the physician be aware of the self-destructive potential in certain of his disturbed patients, and this in turn demands that he anticipate all hazards to the life which he is attempting to save. This situation is a true medical emergency, as urgent as any other in the whole field of medicine.

SUMMARY

Though cultural and religious mores concerning self-destruction vary over the world, such acts in our culture can be considered symptomatic of an underlying emotional illness. The family physician can, by proper diagnostic acumen and management, play a significant role in the area of preventive medicine.

The proper management of an attempted suicide requires that the physical needs of the patient be met and the underlying emotional illness be recognized and adequately treated. In order to prevent suicides, we must be constantly aware that the possibility exists in any emotionally disturbed person. We must be watchful for significant signs and symptoms. Where suicidal preoccupation is suspected, it should be tactfully investigated. Of paramount importance are the physician's attitudes toward the potentially su-

icidal patient. Specific suggestions have been given concerning proper management preceding definitive care of the depressed suicidal patient.

REFERENCES

1. Encyclopaedia Brittanica, 21:532-533, 1954.
2. Lunden, W. A.: Suicides in France 1910-1943. Am. J. Sociol., 52:321-334, (Jan.) 1947.
3. Bennett, A. E.: Preventation of suicide. Calif. Med., 81:396-401, (Dec.) 1954.
4. Unpublished informal report, Iowa State Department of Health, Division of Vital Statistics: Suicides in Iowa, 1936-1946.
5. Personal communication.
6. Jackson, D. D.: Suicide and the physician. The prescriber, 2:10-19, (March) 1955.
7. "Mental Illness: Involutional Psychosis." J. Iowa M. Soc., 45:589, (Nov.) 1955.
8. Batchelor, I. R. C.: Attempted suicide. Brit. M. J. 1:595-597, (Mar. 5) 1955.

Antimicrobial Therapy of Tuberculosis

A Statement of the Committee on Therapy of The American Trudeau Society*

ANTIMICROBIAL THERAPY HAS become established as the keystone in the medical management of tuberculosis. There is agreement among authorities that it is indicated in all instances of active tuberculosis of any organ or system of the body. There are virtually no exceptions to this general statement of indications except with respect to the problem of recent infection which is manifested only by a skin reaction to tuberculin. It has not been established that persons with no other evidence of tuberculosis than a tuberculin skin reaction require treatment or that antimicrobial therapy is of preventive value in this situation, even when the onset of tuberculin sensitivity is recent. Current controlled studies of the treatment of recent reactors in various age groups will require several years at least for evaluation. Meanwhile, since the risk of meningitis is high in infancy and since there is evidence that this particularly dangerous form of the disease may be prevented by isoniazid, recent infection in this age group, even though manifested only by the tuberculin skin test, may reasonably be treated prophylactically.

AVAILABLE DRUGS

Several agents are officially approved and available for general use in the treatment of tuberculous disease. Of these, *isoniazid* and *streptomycin* are the most effective. They are administered with each other, or one or both with *para-aminosalicylic acid* (PAS). While there is general agreement that neither streptomycin nor PAS should be administered alone, there is disagreement whether isoniazid may be administered alone in certain clinical situations. There is as yet no clear agreement with respect to which of the possible combinations of these three drugs may be the antimicrobial "therapy of choice" in the initial treatment of patients never previously treated with any of these agents.

In addition to the three most commonly used antimicrobial agents, there are several others, among the many drugs which have received extensive clinical trial, which are approved or are regarded as still promising. Most important among these are *viomycin*, which is approved and available for general use, and *pyrazinamide*, which is currently under extensive clinical study but has not been approved for general use.

The role of viomycin is secondary, and its usefulness appears to be restricted to situations in which neither isoniazid nor streptomycin can be used to advantage, either because of intolerance to these agents or high degrees of bacterial resistance. Pyrazinamide may prove to be of value, particularly as a companion drug to isoniazid in initial treatment. Its usefulness otherwise has been found to be limited because of its short-term efficacy when administered alone. The principal limitation in the use of pyrazinamide, however, results from its potential hepatic toxicity. The incidence of serious hepatic toxicity, at the dosage level which has been shown in earlier trials to be therapeutically effective, is apparently sufficiently great to preclude at the present time the general use of this drug. *Oxytetracycline* has been reported to have an effect similar to that of PAS in prolonging the therapeutic efficacy of streptomycin when it is administered concurrently with this drug. It has not been used extensively with isoniazid, PAS, or other drugs.

STANDARD REGIMENS

Disregarding the less effective or more dangerous drugs, except as possible future additions or for rare special indications, there are, nevertheless, a number of effective regimens involving only the three more important drugs from which

* Reprinted from THE AMERICAN REVIEW OF TUBERCULOSIS AND PULMONARY DISEASES, 72:408-413, (Sept.) 1955.

the clinician may make his choice. Those may be listed as follows:[1]

1. Stremptomycin-PAS: 1.0 Gm. of streptomycin intramuscularly two or three times weekly and 12 Gm. of PAS (or 15 Gm. of sodium PAS) daily by mouth in three or four divided doses
2. Isoniazid alone: 5 mg. or more of isoniazid per kg. of body weight per day in two or three divided doses
3. Isoniazid-streptomycin (both daily): 5 mg. or more of isoniazid per kg. and 1.0 Gm. of streptomycin intramuscularly
4. Isoniazid daily—streptomycin twice weekly: Same dosage as in regimen 3, but streptomycin given twice weekly instead of daily
5. Isoniazid-PAS: 5 mg. or more of isoniazid per kg. per day and 12 Gm. of PAS daily
6. Isoniazid-streptomycin-PAS: each in dosage as above; streptomycin given daily or twice weekly.

SELECTION OF REGIMEN

Regimens 1 and 2, streptomycin-PAS and isoniazid alone, appear to be somewhat less effective than the other regimens, as judged by organized cooperative trials in *pulmonary* tuberculosis. Percentage advantages in favor of regimens 3 to 6, in terms of such clinical criteria as roentgenographic improvement and sputum culture "conversion," are consistently found in various reports of large-scale comparative regimen trials. These advantages, however, are not large and other factors may be considered in selecting a regimen for a given patient with pulmonary and/or extrapulmonary tuberculosis.

Until very recently, and largely because of longer and more extensive experience, streptomycin-PAS was most often recommended as the therapy of choice for initial therapy in *pulmonary*[2] and in most extrapulmonary forms of tuberculosis. This committee no longer considers this a valid recommendation. There is agreement that isoniazid *must be included* in the treatment of the most immediately dangerous forms of tuberculosis, namely, miliary, meningeal, and acute extensive pneumonic pulmonary tuberculosis. In less immediately life-threatening forms of tuberculosis, there is more latitude of choice. Streptomycin-PAS is still considered to be among the acceptable regimens, although many favor the inclusion of isoniazid in any regimen for initial treatment.

Multiple-drug regimens, including isoniazid, are thus most favored, but the choice among these on present evidence is a difficult one. Regimen 6, isoniazid-streptomycin-PAS, has not been demonstrated to have any clinical advantage over regimens 3, 4, and 5, the two-drug regimens containing isoniazid. Intolerance to one or more of the drugs, furthermore, is encountered most frequently in the three-drug regimen. Bacteriologic results, although they might reasonably have been expected to be superior, have not in fact been shown to be so with the three-drug regimen in pulmonary tuberculosis. However, in genitourinary tuberculosis the three-drug regimen appears to have a definite advantage in the bacteriologic results. The choice of a multiple-drug regimen for pulmonary tuberculosis which is both the most *effective* and *least toxic* appears on present evidence to lie between isoniazid-streptomycin and isoniazid-PAS. There is no clear-cut advantage in one of these two-drug combinations over the other. Isoniazid-streptomycin with streptomycin given daily is probably more effective than when streptomycin is administered only twice weekly.[3] If isoniazid-streptomycin is selected it may prove to be advisable, therefore, to give the streptomycin daily, at least during the first two or three months of therapy.

Isoniazid, as a single-drug therapy, is little favored in the published literature. This regimen was dropped early in most of the large comparative regimen trials, mainly because the *in vitro* tests suggested a probable early loss of effectiveness due to drug resistance. Good results in miliary tuberculosis, however, and the limited evidence available with pulmonary tuberculosis indicate that the correlations between *in vitro* drug resistance and *in vivo* response to treatment are less clear-cut than they are with streptomycin. Clinical results have been much more favorable with isoniazid than with any other antituberculous drug when given alone. Like streptomycin-PAS, isoniazid alone cannot be classed as a maximally effective regimen, but its ease of administration and relatively low toxicity compel a consideration of its use. The precise indications in which isoniazid alone may prove to be the most desirable initial therapy are not yet defined. Its possible field of usefulness in certain situations in which circumstances make the simplest therapy especially desirable are in need of exploration and sys-

[1] The dosages of the various drugs here indicated are for all forms of tuberculosis except the miliary and meningeal. In the latter, isoniazid is recommended in the dosage of not less than 8 to 10 mg. per kg. of body weight per day for the first two or three weeks, after which it may, except in unusual circumstances, be reduced to the 5 mg. level. In these forms it is also recommended that streptomycin be administered daily, rather than twice weekly, at least during the first three months of concurrent administration with isoniazid, and regardless of whether or not PAS is included as a third drug. The recommended regimen for miliary and meningeal tuberculosis is thus different from any of the standard regimens here listed and consists of 8 to 10 mg. of isoniazid per kg. per day in the first two to three weeks, then 5 mg. per kg. per day (Dosages of isoniazid in adults up to 16 mg. per kg. per day are now under investigation. Concurrent administration of vitamin B complex, with especial emphasis on pyridoxine, is indicated to prevent neuritis when high dosages are used.); 1.0 Gm. of streptomycin daily for at least three months, then twice or thrice weekly if progress has been satisfactory; 12 to 20 Gm. of PAS per day (regarded as optional by a minority of the committee).

For more detailed information concerning the treatment of miliary and meningeal tuberculosis, *see* "A Statement by the Committee on Therapy Concerning the Treatment of Tuberculous Meningitis" (Am. Rev. Tuberc., 1954, **70**, 756.)

[2] Am. Rev. Tuberc., 1951, **63**, 617.

[3] British Medical Research Council: Various combinations of isoniazid with streptomycin or PAS in the treatment of pulmonary tuberculosis (7th Report), Brit. M. J., February, 1955.

tematic study. Such special situations include: (1) treatment of the recent tuberculin reactor; (2) outpatient treatment in the various phases of management of the unhospitalized patient, including the post-hospital continuation therapy of patients treated successfully with other regimens; (3) prophylactic therapy to "cover" steroid hormone administration in chronic nontuberculous diseases; (4) non-cavitary pulmonary tuberculosis; and (5) various closed forms of extrapulmonary tuberculosis.

DURATION OF ANTIMICROBIAL THERAPY

Regardless of which of the regimens is selected for initial therapy, there is agreement and overwhelming evidence that *continuous* antimicrobial therapy should be maintained for long periods of at least twelve months, and most often for eighteen months or even longer. When serious intolerance or toxicity develops to one drug or pair of drugs, other antimicrobial therapy should be substituted.

MAJOR TOXIC EFFECTS

The major toxic effects of streptomycin and of isoniazid are well known and can usually be avoided by not exceeding the recommended doses. Certain precautions are, however, to be emphasized. In the presence of renal insufficiency, streptomycin in any dosage becomes dangerous and should be avoided. Since it is itself nephrotoxic, and the concentration in the blood is elevated when renal function is impaired, it should usually be discontinued on the first appearance of any significant degree of renal excretory impairment. The peripheral neuritis sometimes caused by isoniazid may occur more easily under circumstances of renal impairment, alcoholism, and other deficiency states. It occasionally occurs in the absence of these circumstances and at the recommended dosage level. Careful examination will reveal subclinical cases without spontaneous complaints. Central nervous system effects of isoniazid consist mainly of the precipitation of convulsions or of psychoses in persons predisposed or with past histories of such disorders. Although not necessarily contraindicated, because even in these circumstances the precipitation of attacks is rare, the drug should be discontinued immediately on the first indication of such effects. Hypersensitivity reactions to each of these drugs are encountered and these always require immediate interruption. PAS is the most frequent offender in this regard. Hypersensitivity to more than one drug may appear simultaneously. In such circumstances, desensitization may be corrective. Steroid hormone therapy has also been used successfully in overcoming drug hypersensitivity.

Dihydrostreptomycin may be substituted temporarily when necessary for streptomycin, but its long-term use should be avoided when possible because of the danger of auditory toxicity. Viomycin should probably not be used concurrently with streptomycin since their neuro- and nephrotoxic effects are qualitatively similar and may be additive.

BACTERIAL SUSCEPTIBILITY

Discontinuance of either streptomycin or isoniazid, and substitution of the other, may be advisable when the clinical progress has clearly ceased to be favorable. Especially is this true if *in vitro* tests of bacterial susceptibility show a preponderance of resistant organisms. In the case of streptomycin, an *in vitro* inhibitory concentration above 25γ per ml. may be regarded as almost certain evidence of loss of *in vivo* activity, especially if this is found in more than one culture. Levels of *in vitro* resistance between 10γ and 25γ are indicative of doubtful therapeutic effect; susceptibility to 1γ or less is the only sure sign of maximal antimicrobial effect. In the case of isoniazid, the correlation between *in vitro* susceptibility tests and therapeutic effect is less definite. Although resistance to 5γ per ml., or even to 1γ, has been widely regarded as indicative of a loss of antimicrobial effect, this is not firmly established. Even resistance to 20 or 25γ per ml., as demonstrated by the conventional methods, is not always clinically significant. This probably arises from the fact that the conventional tests do not measure the actual proportion of resistant cells in the culture which may be demonstrated even though present in relatively small numbers. PAS-susceptibility tests are unfortunately rarely performed. Failure *in vivo* coincides with *in vitro* resistance or 5γ or more per ml. There is evidence that, when resistance to PAS has developed, continued concurrent administration of this drug no longer reliably exerts a delaying action on the development of streptomycin or isoniazid resistance. In the case of viomycin, failure *in vivo* correlates fairly well with resistance to 25γ per ml. Resistance tests with pyrazinamide are unreliable.

Inasmuch as susceptibility tests require three to eight weeks or more for their completion, they are of limited practical value as guides to therapy. *In vivo* response to the drug does not always parallel the *in vitro* findings, and the latter are not always consistent. Susceptibility tests should, therefore, be performed whenever possible, but should be evaluated in conjunction with clinical data. Initial therapy should usually not be delayed while awaiting results of these tests, nor should alterations in therapy be hastily made on the basis of these results alone.

CORRELATION WITH GENERAL PLAN OF MANAGEMENT

With the several effective drug regimens now available for the antimicrobial therapy of tuberculosis, it is no longer considered necessary to

delay initiation of active treatment until hospitalization can be effected. Initiation of such treatment in the hospital is still considered preferable whenever possible.

Selection of an advantageous initial regimen may be made in any given case from the several regimens which have been listed and discussed. In making this selection, not only the type and severity of tuberculous disease, but the circumstances under which treatment must be carried out, may properly be considered. The multiplicity of choices does not imply a haphazard plan of treatment for best results. An over-all plan should always be formulated at the outset of treatment so that antimicrobial therapy may be correlated with the other modalities such as bed rest, collapse therapy, and surgery. Progress must be reviewed at frequent intervals and timely additions or changes made within the framework of the over-all plan of management.

Carl Muschenheim
For the Committee on Therapy

THE CHEMOTHERAPY OF TUBERCULOSIS IN CHILDHOOD

The chemotherapy of tuberculosis in infants and preadolescents is discussed under a suggested new classification of five categories:

1. *Miliary and meningeal tuberculosis:* Miliary tuberculosis, once almost invariably fatal, responded well to streptomycin and para-aminosalicylic acid (PAS), although some patients developed tuberculous meningitis while under treatment. Following the addition of isoniazid, meningitis has ceased to be a complication. Streptomycin and PAS caused a spectacular reduction in the mortality of tuberculous meningitis. Results have been significantly further improved by the addition of isoniazid. Daily isoniazid and streptomycin are indicated in all such cases. The majority of the committee consider that daily PAS is also indicated; the minority, that its use in such cases is optional.[4]

2. *Clinically active pulmonary and/or extrapulmonary tuberculosis:* All such cases require the prompt institution of chemotherapy, including isoniazid, to prevent progression and miliary or meningeal dissemination.

3. *Tuberculin reactors* (with noncalcific roentgenographic pulmonary or hilar lymph node lesions, without symptoms and with negative bacteriologic findings): Despite the fact that most such lesions have healed spontaneously, too many have shown progression to the more dangerous forms of the disease. Careful evaluation of each case is indicated. In the absence of overt evidence of active, progressive or complicated disease, the use of chemotherapy is now under investigation. When the decision to treat has been made in the individual case, isoniazid in dosage of 5 mg.[5] per kg. per day for at least one year with or without PAS is the chemotherapy of choice.

4. *Tuberculin reactors* (with no demonstrable lesions in the lungs or elsewhere):

a) Recent "conversion" (within one year). An increasing number of authorities are considering the advisability of prophylactic chemotherapy of patients in this category. The committee is not prepared to make a recommendation at this time pending the outcome of controlled studies now in progress.

b) "Conversion" date unknown. Such patients should be kept under observation for one year. Chemotherapy is not recommended unless more specific indications become manifest.

5. *Tuberculin reactors* (with inert calcific hilar or pulmonary shadows): While no treatment is indicated, such persons should be kept under observation.

In general, a routine tuberculin test using intermediate strength 0.0001 or 0.0002 mg. of PPD intracutaneously, or its equivalent, is recommended before one year of age and, if negative, should be repeated annually thereafter. The discovery of unsuspected cases by this technique leads to unsuspected sources of infection. The treatment of infected children should include separation from known sources of further infection. Lastly, it must be stressed that, the younger child, the greater the risk of tuberculosis morbidity and mortality and, hence, the need for clearly effective treatment.

Kenneth M. Smith
For the Committee on Therapy

GENITOURINARY TUBERCULOSIS

Tuberculosis of the genitourinary tract should be sought in every diagnosed case of tuberculous disease, particularly the pulmonary, osseous, and miliary forms. Pyuria may appear many (up to twenty) years after pulmonary tuberculous infection.

Tuberculosis of the genitourinary tract is commonly encountered without demonstrable evidence of active tuberculosis elsewhere, the lesion which was the portal of entry having become quiescent meanwhile.

When tuberculosis of the male genital tract has been diagnosed, the urinary tract should be thoroughly investigated as the probable source of the genital infection.

The diagnosis should be established by guinea pig inoculation or by culture, whenever possible, before treatment with antimicrobial drugs is started. The presence of acid-fast bacilli or microscopy or suggestive roentgenographic findings are not usually sufficient grounds for initiating

[4] For more detailed recommendations, see the statement of this committee on miliary and meningeal tuberculosis, Am. Rev. Tuberc., 1954, **70**, 756.

[5] Dosages in children up to 35 mg. per kg. per day are now under investigation. Concurrent administration of vitamin B complex, with special emphasis on pyridoxine, is indicated to prevent neuritis when high dosages are used.

treatment, although a combination of these two findings may provide a satisfactory basis. Nephrectomy or epididymectomy for tuberculosis is never an emergency procedure and can wait, pending the results of culture or guinea pig examination. It is good practice to collect three twenty-four-hour voided urine samples in sterilized bottles by "clean-voided" technique. These should be kept cool and sent as quickly as possible for concentration and culture or guinea pig inoculation. This will reduce the number of specimens lost through contamination. The guinea pig method is usually superior to the culture method. If both examinations are performed on the same specimen, a higher percentage of positive results will be obtained than with either method separately. Catheter specimens from each ureter should be collected at cystoscopic examination, and should be submitted for both culture and guinea pig examination whenever practical. Drug-susceptibility tests should be performed on positive specimens.

TREATMENT REGIMENS

The treatment of genitourinary tuberculosis should follow the general principles of treatment for tuberculosis. Hospital care is indicated for investigation and initiation of treatment and, unless home conditions are excellent, the main course of treatment should be carried out in a hospital. Four chemotherapeutic regimens are now acceptable.

1. Streptomycin (1 Gm. twice weekly) plus isoniazid (5 mg. or more per kg. per day) plus PAS (12 Gm. daily) for one continuous year or more.

This "triple-drug" regimen appears to be slightly more effective than any combinations of two drugs yet tried, i.e., streptomycin-PAS and streptomycin-isoniazid, in the treatment of advanced renal or genital lesions. This is now the regimen of choice for genitourinary tuberculosis. It should be employed particularly for patients who have failed on other regimens. For patients who are inoperable, this regimen can be continued indefinitely or until toxic reactions force the discontinuance of one or more of the drugs.

2. Streptomycin (1 Gm. twice weekly) and PAS (12 Gm. daily) for one continuous year or more.

This regimen will usually arrest minimal renal lesions which show no deformity by pyelogram. It will also arrest some 70 per cent of advanced (cavitary) renal and genital lesions. It is useful in preparing patients for nephrectomy or epididymectomy, where the chemotherapy is directed in part against the subclinical tuberculous lesions which may exist in the contralateral "good" kidney.

3. Streptomycin (1 Gm. twice weekly) plus isoniazid (5 mg. or more per kg. per day) for one continuous year or more.

This regimen appears to offer little or no advantage over streptomycin-PAS and has the disadvantage of committing the two most effective drugs.

4. PAS (12 Gm. per day) plus isoniazid (5 mg.[6] per kg. per day) for one continuous year or more.

The effectiveness of this regimen is still under investigation and it may well prove to be as effective as triple-drug treatment for genitourinary tuberculosis.

The selection of a regimen for a patient with genitourinary lesions should always allow for the possibility that coexisting pulmonary or other tuberculous lesions might require a different combination of drugs for the particular situation. It is frequently necessary to defer to the requirements of the extragenitourinary lesions since pulmonary, miliary, or meningeal lesions may be more immediately dangerous to life.

GENERAL THERAPEUTIC CONSIDERATIONS

a) In those cases in which *M. tuberculosis* is found in urine on culture, but show no evidence of abnormality in the pyelogram, good results can be expected by prolonged (twelve to eighteen months) chemotherapy, without resort to surgery.

b) In the event that a patient has a cavity in only one section of one kidney, it may be feasible to do a segmental resection of that kidney after four months of chemotherapy. Chemotherapy should then be carried on for a minimum of eight more months.

c) When there is one destroyed kidney, it is advisable to give a preliminary course of chemotherapy for a period of three weeks to four months before surgical excision of the destroyed kidney is considered. At nephrectomy, good results have been obtained in the disposition of the ureteral stump by bringing it to the skin at the anterior end of the nephrectomy wound. This technique makes it unnecessary to remove the ureter *in toto*.

d) Patients with bilateral renal tuberculosis, with cavity, on whom no thought of surgical excision can be entertained, should be treated with chemotherapy for a period of no less than one year and usually much longer.

e) To guard against the development of ureteral strictures, excretory urograms should be performed every four months throughout the treatment period. Cystoscopic dilatation of any such strictures should be done as soon as they are detected and while the patients is still on chemotherapy. Tuberculous strictures of the lower end of the ureter which cannot be dilated can be resected safely during chemotherapy.

f) Epididymal tuberculous abscesses respond well to chemotherapy. If the enlargement of the abscess progresses, or sinus formation occurs, or soreness persists, the nodule in the epididymis

[6] Dosages of isoniazid of up to 16 mg. per kg. per day are now under investigation. Concurrent administration of vitamin B complex with special emphasis on pyridoxine is indicated to prevent neuritis when high dosage is used.

should be excised. The patient's fertility status should be considered, however, before irrevocable bilateral epididymectomy is performed. One year or more of chemotherapy should always accompany epididymectomy on the assumption that an active prostatic lesion is also present.

g) Prostatic and seminal vesicle tuberculosis also respond to chemotherapy, with "conversion" of urine cultures and some shrinkage in the size of the lesions. Total prostato-vesiculectomy is rarely indicated for prostatic tuberculosis.

h) Tuberculosis of the urinary bladder responds readily to chemotherapy if the lesions are superficial. If the bladder is scarred and severely contracted, however, diversion of the urine may become necessary in order to protect the kidneys from back pressure. Cutaneous ureterostomy is the operation of choice here. The ureters should never be transplanted into the colon when there is a question of active tuberculosis of the kidneys. The tuberculous kidney does not tolerate superimposed *B. coli* pyelonephritis.

i) Annual or semi-annual examinations for pyuria should be performed on all patients with tuberculosis of any form. As few as 3 to 5 leukocytes per highpower field in a centrifuged urine specimen (of specific gravity of 1.015 or less) should be investigated by repeated urine cultures and guinea pig inoculations for *M. tuberculosis*. Females should be catheterized. Tuberculosis may be present either with or without simultaneous pyogenic urinary tract infection, and with either alkaline or acid urine.

John K. Latimer
For the Committee on Therapy

THE PRESENT STATUS OF EXCISIONAL SURGERY IN THE TREATMENT OF PULMONARY TUBERCULOSIS

Since its statement of 1953, the Committee on Therapy has continued to follow changing trends in the indications for excisional surgery of pulmonary tuberculosis. The place of resection in the treatment of destroyed lung, tuberculous bronchiectasis, and fibrostenosis of a major bronchus has changed very little. The resection of cavities during prolonged chemotherapy, with or without positive sputum bacteriology, is generally practiced.

At the present time, the excision of nonair-containing nodules, either filled in or unsloughed, in patients with negative sputum bacteriology during prolonged antimicrobial therapy in pulmonary tuberculosis can neither be recommended nor condemned.

There is now less enthusiasm than formerly for such surgery because of the known results of bacteriologic studies of surgical specimens and the apparent success of long-term drug therapy.

Because of the antimicrobial therapy, advances in surgical technique and anesthesia, blood replacement, pulmonary function studies, improved patient care, and case selection, the surgical mortality and morbidity rates have been reduced to very low figures. Yet it should be remembered that the morbidity and mortality rates for long-term drug therapy are also very low.

When the patient is treated with long-term drug therapy with the addition of surgical excision, the physician should make every effort to conduct thorough morphologic and bacteriologic studies of resected tissues and all patients should be followed carefully, in order to increase our knowledge of this controversial subject.

Raymond F. Corpe
For the Committee on Therapy

William Barclay
Paul Chapman
Raymond Corpe
Carl Muschenheim
Cecil G. Shaver
Herbert E. Sloane, Jr.
Kenneth M. Smith
Morris Thomas
Robert L. Yeager
Roger S. Mitchell, *Chairman*

OPHTHALMOLOGY AND OTOLARYNGOLOGY

The tenth annual University of Florida Midwinter Seminar in Ophthalmology and Otolaryngology will be held at the Sans Souci Hotel, in Miami Beach, the week of January 16, 1956. The lectures on ophthalmology will be presented on January 16, 17 and 18, and those on otolaryngology on January 19, 20 and 21. A midweek feature will be the midwinter convention of the Florida Society of Ophthalmology and Otolaryngology on Wednesday afternoon.

The lecturers on ophthalmology include Dr. F. H. Adler, Philadelphia; Dr. C. W. Rucker, Rochester, Minnesota; Dr. A. G. DeVoe, New York; Dr. M. J. Hogan, San Francisco; and Dr. A. D. Ruedmann, Detroit. Those lecturing on otolaryngology are to be: Dr. F. A. Figi, Rochester, Minnesota; Dr. L. F. Morrison, San Francisco; Dr. C. E. Kinney, Cleveland; Dr. J. R. Lindsay, Chicago; and Dr. B. J. McMahon, St. Louis.

REFRESHER COURSE IN SURGERY

The University of Kansas School of Medicine announces its Eleventh Annual Postgraduate Refresher Course in Surgery, to be presented January 16 to 19, 1956, at the K. U. Medical Center, in Kansas City, Kansas. The program will include operative clinics with color television, cine clinics, ward walks, basic science in surgery and surgical treatment of injury and cancer.

A fee of $60 will be charged. Program announcements and registration cards can be obtained from the Department of Postgraduate Medical Education, University of Kansas Medical Center, Kansas City 12, Kansas.

State University of Iowa College of Medicine

Clinical Pathologic Conference

May 11, 1955

SUMMARY OF CLINICAL FINDINGS

A SEVEN-MONTHS-OLD white male was first admitted to this hospital because of a fever that had recurred at intervals during the previous two months, and because of a breathing difficulty that had persisted for a week.

The medical history of his family revealed no information pertinent to his case. Two older siblings, 5 and 8 years of age, were healthy. His birth had terminated a full-term, uncomplicated pregnancy. The onset of labor had been spontaneous, and its progress had been uneventful. The infant's birth weight was 8 lbs. 5 oz. During the neonatal period, no cyanosis, jaundice or respiratory difficulties were noted. The infant was bottle-fed, and vitamins had been given him consistently. He achieved the landmarks of growth and development at the usual ages.

His parents stated that they had thought him perfectly well until two months prior to his admission, at which time he began to cough, and ran a fever of 104°F. The family physician made a diagnosis of pneumonia on the basis of clinical findings, and the patient was given penicillin and Aureomycin therapy. He seemed to recover from that illness promptly and completely.

One month prior to admission, the infant had measles, and afterward, a chronic otitis. In spite of antibiotic therapy, a low-grade (101-102°F.) afternoon fever and a mild cough were present. Approximately one week before his admission, he was examined by the family doctor, and the possibility of his having a pleural effusion was noted. On the basis of the roentgenogram taken on the day prior to his admission, he was referred to this hospital for further study.

Physical examination showed that the patient's weight and linear length compared favorably with the standards for infants of his chronological age. In spite of some mild respiratory distress, he was alert. There was bilateral retraction of the intercostal spaces, with some diminished movement of the left upper thoracic cage. No dullness was present on percussion, but the breath sounds were diminished over the left upper half of the chest. Neither supraclavicular nor subcostal retraction was noted. The respiratory rate was 60 per minute. Percussion over the heart showed that the size was increased, but no precordial overactivity was present. The heart sounds were faint and rapid. No cardiac murmur was present, and no thrill was recorded. By the flush method, a systolic blood pressure of 80 mm. Hg. was established. The heart rate was 180 per minute. The liver was palpated 2 cm. below the costal margin. A chronic bilateral otitis media was present.

The laboratory work at the time of admission showed the hemoglobin to be 10.9 Gm./100 ml. The red blood count was 4,140,000 per cu. mm., and the white blood count was 12,000 per cu. mm. The differential count was 43 per cent segmented polymorphonuclears, 2 band polymorphonuclear leukocytes, 1 basophil, 52 lymphocytes and 2 monocytes. A roentgenogram of the chest showed an increase in heart size, but there was no evidence of a pneumonic process.

A bilateral myringotomy was done, and a very small amount of purulent discharge was obtained from the left ear.

At the time of admission, the patient's temperature was 100°F., but it increased during the next six hours to 104°F. Daily spikes of fever continued during the next six days. During that time the patient received 800,000 units of penicillin and 300 mg. of streptomycin a day. No organisms were cultured from two samples of blood drawn when the patient had spikes of fever.

Because of the increased heart size that had been found, a cardiac fluoroscopic examination was done. There was cardiac enlargement, the left side being predominantly involved. There was no evidence of pulmonary congestion and no evidence of pneumonia, pulmonary effusion or atelectasis.

An electrocardiogram showed left ventricular hypertrophy and a heart rate of 142 per minute.

By the seventh hospital day, the infant was afebrile. His appetite increased, and his respiratory difficulty cleared. He was dismissed on his eighteenth hospital day.

The child was readmitted two weeks later. He had been well until five days prior to that time, when he developed a cough and a low-grade fever. Achromycin and sulfa therapy were started. His appetite diminished, there was an increase in the severity of his cough and his low-grade fever continued.

At the time of admission, the child had severe respiratory embarrassment with retraction of the intercostal spaces. The respiratory rate was 30 per minute. Coarse rhonchi were heard over the left anterior chest wall. The cardiac dullness was again

recognized to have increased. The heart rate was 102 per minute. The liver was 2 cm. below the costal margin.

A hemogram showed 12.8 Gm. of hemoglobin per 100 ml., a white count of 15,250 per cu. mm., with a differential of 52 per cent segmented polymorphonuclear leukocytes, one band polymorphonuclear leukocyte, one eosinophil, one basophil, 39 lymphocytes and 5 monocytes.

The child was acutely ill. He was given 400,000 units of penicillin and 250 mg. of streptomycin intramuscularly, and oxygen therapy was given him by means of a croupette.

During the following twelve hours, the fever increased to 104°F., and the respiratory excursions became more labored and rapid. A roentgenogram was taken, and the heart was found to be enlarged to the same degree as previously noted. There was atelectasis involving the left lower lobe and an interstitial or peribronchial pneumonitis in the right base.

The child's disease progressed rapidly and unfavorably. Anticipating digitalization of the patient, 120 micrograms of Digitoxin were given intramuscularly.

A few hours before death, the respiratory rate was reported to be 80 per minute, and the pulse 160 per minute.

CLINICAL DISCUSSION

Dr. John C. MacQueen, Pediatrics: Before we discuss the acute symptoms that caused this child's death, I should like to review his early illness so as to improve our perspective of the clinical course of this disease.

Until he was five months of age, this child was thought to be entirely well. Then he had the onset of a cough and a fever, and the clinical diagnosis of pneumonia was made. Pneumonia is not a common disease in early childhood. Generally speaking, it is said that it is infrequent during the first few months of life. Thereafter, there is a rapid upswing in its incidence, and the peak occurs at approximately two years of age. If a child or infant has lobar pneumonia, he has the clinical course of the disease that is common to the adult. More commonly, the child or infant has a bronchial pneumonia following an upper respiratory tract infection. The symptoms of these infections may overlap, so that the pneumonic process may not be identified for some time. This child's pneumonia seemed to respond very nicely to conventional therapy.

At two months of age, the child had measles. We might wonder whether he may not have been born without the usual passive immunity to measles, or whether his natural passive immunity was decreasing. It is the fortunate child who has an attenuated form of measles during the latter part of the period of his natural passive immunity. It is commonly known that many complications can follow measles. The commonest of these are otitis and pneumonia, but even carditis has been recognized as a sequela. This child had an otitis as a sequela of his disease. His chronic cough suggests that he had a bronchitis. The symptoms of these sequelae increased in severity until his first admission.

The protocol records the clinical findings at the time of his admission. I wish to point out that the patient's respiratory rate was 60 per minute, and that his systolic blood pressure was 80 mm. Hg., as determined by the "flush" method.

The use of the "flush" method of taking blood pressure is a common practice in pediatrics. It is a modification of the Weaver and Bohr method of determining digital systolic blood pressures. For the purpose of standardizing the procedure, the following technic has been made routine. A 4.5 cm. cuff is wrapped around either the wrist or the ankle of the infant. An ace bandage is wrapped tightly around the corresponding foot or hand. A pressure of 140 mm. Hg. is produced in the cuff. The ace bandage is removed, and then the pressure is slowly decreased at the rate of 7 mm./sec. The appearance of blood (flush) in the extremity is the end point for the systolic pressure. It is said to be a "reasonably dependable" method for taking blood pressure. Certainly it is not an exact one, but if you have attempted to use the standard ausculatory method of taking blood pressures in the infant or small child, you will be interested in trying this method and will be inclined to accept a certain amount of inaccuracy.

The laboratory work done at the time of the child's first admission was not remarkable for a patient of his age. The hemoglobin level was perhaps a little low. The white blood count of 12,000 is slightly elevated, when compared with the 9,000 count that is anticipated in a child of his age.

Because of the otitis, a myringotomy was done at the time of his admission. This local infection cleared very nicely. The fever increased, but no bacteremia was present during the spikes of fever. Because of the physical findings of increased heart size, it was desirable to obtain a fluoroscopic examination of the heart. The purpose of this examination was to determine whether there was a pericardial fusion, a cardiomegaly, a unique aspect of the heart shadow or a pulmonary pathology. The fluoroscopic examination showed a predominantly left-sided cardiac enlargement. There was no evidence of pulmonary disease. The child was dismissed on the eighteenth day, free of symptoms, but with no change in the heart size.

He returned in two weeks, when a recurrence of respiratory infection apparently had precipitated respiratory and circulatory difficulties. His clinical apperance at the time of the first admission had been good. In contrast, he was critically ill at the time of his second admission.

Dr. Odell, who concerns himself with the car-

diac problems of the Department of Pediatrics, will discuss the differential diagnosis of cardiomegaly.

Dr. James E. Odell, Pediatrics: At his first admission, this particular child presented evidence of an acute ear infection, but it responded satisfactorily to treatment. During this period, however, he was noted to have a rather extreme cardiomegaly in the absence of cardiac murmurs and hypertension.

At his subsequent admission, his course was primarily one of respiratory difficulty, ultimately resulting in his death. Again, cardiomegaly was evident. Hypertension was not noted, nor were murmurs heard. We utilized two reasonably accessible aids. The first consisted of the X-ray films taken at the fluoroscopic examination. The fluoroscopist reported compression of the left main bronchus, probably based upon cardiac enlargement, and considerable cardiomegaly, particularly of the left ventricle. In the left anterior oblique view, the prominence of the left ventricle was especially evident. In the anterior-posterior view, the apex was displaced outwards.

At the time of the patient's first hospital admission, there was evidence of a coarsening of the bronchovascular markings in the right lung. There was considerable thymus shadow. The second piece of useful evidence was the electrocardiogram taken at the same time. In the right chest leads, there was predominantly an S wave, with very little R wave present. Occasional ventricular ectopic beats were apparent. In the left chest leads, there was a very tall R wave, the S was small and the T wave was diphasic. The ventricular activation time in V6 was over five hundredths of a second. This finding, we feel at the present time, is indicative of left ventricular hypertrophy.

We are faced with the problem of explaining cardiomegaly in this child. I might say that it is difficult to diagnose cardiac failure in small infants when it is coupled with fever and signs of infection. Venous distention of the neck is much less helpful in infants than it is in adults, probably because of the shortness of the neck and the relatively greater amount of subcutaneous tissue. Secondly, the liver is normally palpable in a child of this age, and it is more readily so in the presence of infection alone. It was felt, however, that at the time of this infant's second admission his liver was becoming progressively enlarged and that in the face of extreme cardiomegaly he probably had cardiac failure as well as a pneumonic process. The differential diagnosis of cardiomegaly in infants—particularly those who, like this one, show left ventricular hypertrophy—is somewhat as follows.

First of all, I think we must consider congenital heart disease of the more usual types, specifically those congenital conditions which may result in left ventricular hypertrophy. Fortunately, these are rather uncommon in infancy. The first is coarctation of the aorta, which certainly may occur without audible murmurs at this age. Against it in this particular child was the presence of easily palpable femoral pulses, and I believe a blood pressure was recorded in the lower extremities which was not out of line with that in the upper extremities. Coarctation of the aorta is a rather uncommon cause of failure in infancy, but it does occur.

Second, I think we must always suspect patent ductus arteriosus. Though this condition is normally thought to be relatively benign until later in life, during the last two or three years it has been brought to our attention that certain infants die in cardiac failure under one year of age, often without murmurs, but more commonly perhaps with a systolic murmur only. In patent ductus arteriosus, the burden of excessive cardiac work falls upon the left ventricle. In this case there was, perhaps, only one contraindication for patent ductus arteriosus, and that was the failure of the chest film or the fluoroscope to reveal an increase in the vascular markings in the pulmonary bed and a "hilar dance" or pulsation of the pulmonary arteries.

Third, we must consider anomalous origin of the left coronary artery from the pulmonary artery. This may cause a large heart in infants, and may result in cardiac failure and death. It certainly occurs without murmurs. The electrocardiographic pattern in our patient did not favor that particular diagnosis. Although relatively few cases have been well documented in the literature since the introduction of multiple unipolar chest leads, the electrocardiograms tend to show patterns of myocardial infarction. These children are said to have attacks which closely resemble angina in the older individual—attacks of what appear to be colic, accompanied by profuse sweating and pallor. This child presented no such history.

Fourth, we must concern ourselves with specific myocarditis. First, of course, is rheumatic myocarditis. The age group is wrong for the child whom we have under consideration. Generally speaking, rheumatic fever with myocarditis occurs from two years of age upwards. It is associated with an increase in acute phase reactants, in C reactive protein, in mucoproteins and in the erythrocyte sedimentation rate. They were not measured in this particular child. There was no history of joint pain. One does not need such a history in small children, but for what it is worth, it was lacking in this particular case. Perhaps the most contradictory thing, of course, is the child's age.

Then we must consider the various myocardidities which have been described secondary to infection, and there are many of them. As Dr. MacQueen has pointed out, myocarditis has been described secondary to measles. Certainly one sees myocarditis secondary to diphtheria, though perhaps on a somewhat different basis. It has been associated with poliomyelitis, and with virtually every

bacterial and viral infestation. The cause is not always well understood. It may be an actual invasion of the myocardium by the infective organism, perhaps it is toxic (whatever that may mean), and perhaps in certain instances it is a phenomenon of hypersensitivity. Myocarditis has also been thought to have resulted from hypersensitivity to drugs, particularly to arsenicals and to sulfas. Neither was present in this particular child. It is usually said that in myocarditis the cardiac enlargement is diffuse, but in this child it was more or less limited to the left ventricle. The electrocardiogram in myocarditis is ordinarily thought to show prolonged conduction and usually low voltage QRS complexes, neither of which was present here.

Fifth, we must consider non-specific myocarditis, a waste basket type of classification. Interstitial myocarditis is known as Fiedler's myocarditis, and there are instances of idiopathic granulomatous myocarditis.

Sixth, we come to a disease which all pediatricians like to talk about, but which very few have ever seen. It is called Pompe's glycogen storage disease of the heart, or it is incorrectly referred to as Von Gierke's. The latter designation should undoubtedly be discarded. In Pompe's glycogen storage disease, the deposition of large quantities of glycogen in the myocardial fibres results in gross enlargement of the heart. It usually involves both ventricles and skips the auricle. The electrocardiographic pattern has not been well defined. Actually, if one sets up rather stringent criteria for this diagnosis, there are no more than 15 or 16 of the reported cases that can satisfy them.

The seventh group is somewhat more common, but to my mind considerably more bizarre and less well explained. It is known as rabdomyomatosis or rabdomyoma of the heart. Lesions of this sort have long been thought to be glycogenic tumors. Many clinicians question seriously that they are tumors at all. In fact, they represent glycogen deposit localized in circumscribed areas, rather than diffused through ventricular muscle fibres. It is perfectly true that glycogen may be deposited in muscle fibres that have been damaged by myocardial infarction, for example. The relationship between rabdomyomatosis and Pompe's disease of the heart is unsettled. Again, the cardiac enlargement is very likely to be more diffuse than it was in this particular child. There is no reliable information about electrocardiograms.

Eighth, one must consider beri-beri heart disease, though it must be very rare in Iowa. One would expect to see this disease involve the right ventricle, with hepatomegaly, peripheral edema and signs of right ventricular failure, all of which were absent in this child. One would expect to see it in the breast-fed infant of a mother whose diet was absolutely minimal, and that was not true here. And one would expect to see a dramatic response to thiamin, again untrue in this instance. On occasion, certain neurologic disturbances are recorded, such as ptosis of the eyelids and loss of reflexes.

Ninth and last, we come to the choice which was made at the time of this child's admission, and we shall presently see how correct we were. The pathology on which we agreed is being described as endocardial fibro-elastosis, for lack of a better name. It has had a checkered medical history and still is not well defined. It is most commonly found to involve the left ventricle and to result in left ventricular enlargement, left ventricular hypertrophy on the electrocardiogram, and very often just such a course as this child presented—that of repeated infections, usually respiratory, and ultimate death in left ventricular failure. Murmurs may or may not be present. When present, they are usually uncharacteristic. Because we feel that endocardial fibro-elastosis is perhaps more frequent than the literature suggests, certainly commoner than Pompe's disease or rabdomyomatosis, because we had no reason to suspect an acute myocarditis, because no infarct pattern appeared on the electrocardiogram and because there was no evidence of a patent ductus or a coarctation, we made the diagnosis of endocardial fibro-elastosis.

Dr. MacQueen: Are there questions concerning this patient's clinical course, his disease or his laboratory findings?

Dr. Robert Soper, Resident in Surgery: Were spinal punctures done?

Dr. MacQueen: No, spinal punctures were not done.

Dr. Frederic W. Stamler, Pathology: This child did have the anatomical findings which we have classified as endocardial fibro-elastosis or endocardial sclerosis, formerly known as fetal endocarditis. The findings included great cardiac enlargement. The heart weight was 138 Gm., which is about 3½ times the normal heart weight for an infant of this age. The enlargement was chiefly due to left ventricular hypertrophy. In addition to the enlargement of the left ventricle, there was, as in the typical case, thickening and sclerosis of the endocardium involving principally this ventricle. Many of the hearts with this entity have some anomaly, but the only anomalous development here was some deformity of the tricuspid valve. There was a partial fusion of one cusp of the valve to the right ventricular wall. In spite of the tremendous hypertrophy and endocardial sclerosis, there was no evidence whatsoever of an active endocarditis or myocarditis. There was some edema of the myocardium and perhaps a very slight diffuse interstitial myocardial fibrosis.

In addition to the cardiac findings, there was a chronic pneumonitis from which we cultured several organisms, including Staphylococcus aureus and Proteus morganii. There was a little mucoid material in one ear, but because it was culturally

sterile, we could not say there was an ear infection. There was no evidence of active infection elsewhere in the body.

The findings were quite in accord with those usually regarded as characteristic of this entity, and as far as the etiology of the condition is concerned, it has been indicated that there is no unanimity of opinion as to the causative factors. The condition was originally designated fetal endocarditis, and that term suggests infection in utero. Although not entirely, that idea has now been pretty well discarded. I believe that the most popular concept at present is that the condition is a dysplasia of the endocardial tissues which originates during fetal life, possibly because of some unknown nutritional or infectious process. But we really have no adequate explanation for the pathogenesis of the lesion. It is found in connection with certain cases of coarctation of the aorta and with other anomalies that impede the outflow of blood from the heart and thus increase the intraluminal pressure, and it is also seen in a fairly large share of certain other types of cardiac anomalies, such as origin of the left coronary artery from the pulmonary artery, so that the left ventricle is subjected to anoxia. Another suggested mechanism whereby anoxia might be brought into play is that of premature closure of the foramen ovale in some cases. How this can be proved or disproved, I do not know. After the lesion has been established, the mechanism of cardiac failure is fairly obvious in that the heart is greatly enlarged, activity is mechanically impeded by the great degree of endocardial sclerosis, and the thick layer of sclerotic tissue interferes with the venous drainage of the heart, thereby contributing to the dysfunction of the heart.

Dr. Robert I. Lubin, Medicine: Would you say something about the adult form of this disease?

Dr. Stamler: In a pathologic anatomical sense, there are certain similarities between adult cases and these infant ones, although they very often begin so late in life that they cannot be considered congenital. I heard considerable discussion of these conditions last fall during an international conference that I attended in Washington, at which certain of the participants, particularly ones from South and West Africa, reported large series of cases. The processes appear quite similar, pathologically. The African physicians described three stages in this process, the late stage being endocardial or endomyocardial sclerosis very similar to that seen in infancy. First of all, there may be a considerable hypertrophy without much sclerosis. Mural thrombosis and sclerosis developed secondarily. I did not mention it, but mural thrombosis with embolic phenomena is also one of the complications in the infantile form. The foreign doctors had no real idea as to what might be the etiologic factors. They discussed a great many concepts which they had considered and had more or less ruled out, including nutritional deficiencies, infectious processes and environmental factors of other sorts, but they had come up with no answer regarding etiology. It was interesting that in the discussion that followed these papers, isolated instances of similar disease were presented from this country and from European countries, and as a matter of fact I think we have seen a few cases very similar to that in this institution. I can say no more than that about it. It is entirely mysterious at this time, as far as the etiology is concerned.

SUMMARY OF NECROPSY FINDINGS

The most conspicuous anatomical abnormality was massive myocardial hypertrophy affecting principally the left ventricle, with considerable sub-endocardial thickening and sclerosis of the left ventricular wall. The only cardiac valvular abnormality concerned the tricuspid valve, with fusion of a thickened leaflet to the ventricular wall. The myocardium showed considerable interstitial edema, but there was no evidence of active carditis.

The left lung was partially collapsed as a result of compression by the enlarged heart, and both lungs showed congestion, diffuse fibrosis and low-grade chronic pneumonitis. No ear infection was demonstrated.

Death was due to myocardial failure of a heart which showed the lesions of "endocardial fibroelastosis."

NECROPSY DIAGNOSES

Endocardial fibro-elastosis of heart

Myocardial hypertrophy, predominantly left ventricular

Patchy collapse, left lung

Pulmonary fibrosis, chronic pneumonitis and pulmonary congestion, bilateral

Dr. MacQueen: Classically, these pediatric patients are divided into three groups. One is made up of the children who have the sudden onset of cardiac failure during the first six months of life. These acute episodes seem to be precipitated by acute respiratory tract infections, and the patients have early deaths. The patient presented today would be classified in that group. There is a second group of children who have a more insidious onset of cardiac failure and respiratory difficulties. Their life expectancy is somewhat longer, but the prognosis remains almost uniformly unfavorable. There is a third group who have their disease in relation to what seems to be congenital anomalies or valvular lesions. The majority of patients with this disease are in the first group, and 90 per cent die during their first year of life.

I should like to ask Dr. Odell some questions. *Have any of these cases had cardiac catheterizations to determine the dynamics of their cardiac function?* From a clinical point of view, respir-

atory tract infection seems to be the thing that precipitates acute difficulty. *Are these respiratory infections coincidental, or are these children living on such a small margin of safety that the infections disrupt their tenuous cardiac adequacy?* In the microscopic pathologic report of this patient, it is stated that the lung tissue showed considerable fibrosis. *Is this the result of the respiratory infections, or is there a generalized disturbance of the fibrous tissue related to the disease? Is there any relation between the cor pulmonale present in these children and the cor pulmonale of the patient with fibrocystic disease?*

Dr. Odell: You have given me quite a large order. We have completed the catheterization of a child who is still alive, but in whom we believe that endocardial fibro-elastosis is the correct diagnosis. I know of four other instances of catheterization in this disease. In two of them, the disease was proved at postmortem. The other two children are still alive. Two children showed perfectly normal cardiac catheterization findings, and two of them showed mild to moderate pulmonary hypertension. In these, the pulmonary "wedge" pressure was not obtained. We feel that this reflects left atrial pressure. In the patient under discussion today, pulmonary "wedge" pressures were rather elevated. There was no evidence of a shunt. The pulmonary artery pressure was duly increased, presumably because of the increase in left atrial pressure, and similarly, the right ventricular pressures.

The differentiation between pneumonitis and cardiac failure is very difficult in any child of this age. These children die of left ventricular failure with pulmonary edema, a situation in which the child is peculiarly liable to lung infection. We know that in children with excessive pulmonary blood flow and pulmonary hypertension, lung infections are most common. Pulmonary hypertension is certainly present at least in some of them. It has not been found to be extreme, however, in any, and not to the point of producing cor pulmonale, with its inherent effect upon the right ventricle. Many of these patients have mitral stenosis, and they follow a course much like that of rheumatic mitral stenosis, only in a more rapid form—an abbreviated, accelerated pattern. The current probabilities as to the cause of death have already been mentioned: (1) anoxia of the myocardium based upon obstruction of venous return from the myocardium through the thesbian vessels, and (2) simple mechanical restriction of diastolic filling. This could be termed constrictive endocarditis. The catheterization findings would fit this very nicely.

Next, as regards the problem of treatment. A proposed therapy based upon the assumption that the primary difficulty is myocardial stagnation anoxia consists of placing talcum power within the pericardial sac in the hope that one may set up a sufficient collateral to drain off the stagnated venous blood from the myocardium. A report on that procedure is in press, and its authors feel that they have very hopeful preliminary data. As to the possible etiologies that Dr. Stamler has mentioned, I think that perhaps we should consider anoxia of the endocardium as being the predominant incipient factor, at least in the infant. It is undeniably difficult to prove premature closure of the foramen ovale, but many investigators think that during fetal life the myocardium gets most of its blood supply through sinusoids from the ventricular chamber. If there were premature closure of the foramen ovale, there would be a lower than normal oxygen content in the left ventricle, possibly resulting in anoxia of the left ventricular endocardium. Certainly this condition rather commonly accompanies anomalous drainage of the left coronary artery, and anoxia would be an easily implied factor.

Dr. MacQueen: We have presented a case this afternoon that may or may not represent a clinical entity. It has long been recognized that a number of children die as a result of cardiac failure related to cardiomegaly. In the past, it was referred to as idiopathic cardiac hypertrophy. Upon the recognition that many of these patients had a fibrotic process of the endocardium, an effort was made to establish a clinical entity. The confusion that exists about the disease state and its etiology is reflected in the numerous names that have been applied to it: fetal endocarditis, endocardial fibrosis, prenatal fibro-elastosis, elastic tissue, hyperplasia and endocardial sclerosis.

This disease has its onset during the first months of life. It runs a predictable course, ending in death in the majority of cases within the first two years of life. It is not uncommon. Cardiomegaly of an undetermined etiology is the predominant physical finding and reflects the basic pathologic process. At present, therapy for the disease is supportive, and is directed toward control of cardiac failure and respiratory infections.

NAIL POLISH SEALS FUNGAL INFECTION

A Miami physician has outdone women who, proverbially, can fix anything with a hairpin or a little nail polish. Dr. Hollis F. Garrard has reported in the October issue of the AMA's ARCHIVES OF DERMATOLOGY that he has successfully used nail polish as a sealer in treating fungal infection of the fingers and nails.

He says that the sealer acts as artificial cuticle in keeping water and foreign material from getting under the loose skin around the nail. Nail polish, when used for that purpose, he finds superior to rubber gloves or finger cots because it is always present and is invisible. The 59 patients whom he has thus treated had monilial paronychia.

Coming Meetings

In State

Dec. 8	**Diabetes.** SUI College of Medicine, Iowa City
Jan. 23-25	**Anesthesia.** SUI College of Medicine, Iowa City
Jan. 23-25	**Anesthesia.** SUI College of Medicine, Iowa City
Feb. 15-18	**Refresher Course for General Physicians.** SUI College of Medicine, Iowa City
Mar. 29	**Diagnosis of Surgically Remediable Heart Disease.** SUI College of Medicine, Iowa City
Mar. 30-31	**Urology.** SUI College of Medicine, Iowa City
Apr. 11	**Neurology.** SUI College of Medicine, Iowa City
May 16	**Allergy.** SUI College of Medicine, Iowa City

Out of State

Dec. 1	**Infectious Diseases.** Univ. of Buffalo School of Medicine, Buffalo
Dec. 1-3	**Gastroenterology for General Physicians.** U. of Minn. Center for Continuation Study, Minneapolis
Dec. 1-3	**Postgraduate Urology** (North Central Section, Amer. Urol. Assn.) Mayo Clinic, Rochester
Dec. 1-21	**Pain Syndromes: Diagnosis & Treatment by Regional Block.** U. of Penna., Philadelphia
Dec. 5-7	**Recent Advances in Diagnosis and Treatment of Poisoning.** New York University, NYC
Dec. 5-7	**Surgery of Trauma.** Southwestern Med. School of U. of Texas, Dallas
Dec. 5-7	**Infertility.** New York University, NYC
Dec. 5-7	**Ophthalmological Conference.** U. of California, San Francisco
Dec. 5-7	**Diagnosis & Treatment of Poisonings.** New York University, NYC
Dec. 5-9	**Pediatric Cardiology.** New York University, NYC
Dec. 5-9	**Advanced Electrocardiography; Complex Arrythmias.** Michael Reese Hospital, Chicago.
Dec. 5-10	**Postgraduate Course in Diseases of the Chest.** Am. Coll. Phys., Ambassador Hotel, Los Angeles
Dec. 5-10	**Heart and Great Vessels in 1955.** Massachusetts General Hospital, Boston
Dec. 5-10	**Diagnosis and Treatment of Trauma.** New York University, NYC
Dec. 5-10	**Postgraduate Course on Diseases of Chest (Am. Coll. of Chest Physicians).** Ambassador Hotel, Los Angeles
Dec. 5-14	**Medical Care of Atomic Casualties.** Walter Reed Army Medical Center, Washington, D. C.
Dec. 7-9	**Refresher Course for General Practitioners.** Vancouver General Hospital, Vancouver, B. C.
Dec. 8	**Pediatric Clinical Seminar.** Albany Medical College, Albany
Dec. 11-16	**Radiological Society of North America.** Chicago
Dec. 12-14	**Am. Academy of Obstetrics & Gynecology.** Conrad Hilton Hotel, Chicago
Dec. 12-16	**Vaginal Approach to Pelvic Surgery.** Cook County Graduate School of Medicine, Chicago
Dec. 19-23	**Clinical Bronchoscopy.** Cook County Graduate School of Medicine, Chicago
Jan. 1-20	**Pain Syndromes: Diagnosis & Treatment by Regional Block.** University of Pennsylvania, Philadelphia
Jan. 2-6	**Physical Therapy and Occupational Therapy in Care of Poliomyelitis.** Georgia Warm Springs Foundation
Jan. 3-5	**Los Angeles Midwinter Medical Convention (85th Anniversary).** Biltmore Hotel, Los Angeles
Jan. 5-7	**Obstetrics for General Physicians.** U. of Minn. Center for Continuation Study, Minneapolis
Jan. 9-10	**Electrocardiography.** New England Center Hospital, Boston
Jan. 9-11	**Minor Surgery.** Mt. Sinai Hospital, NYC
Jan. 9-13	**Etiology, Diagnosis and Treatment of Heart Diseases.** New York University, NYC
Jan. 9-13	**Diagnosis & Treatment of Peripheral Nerve Injuries.** New York University, NYC
Jan. 9-14	**Pan American Congress of Ophthalmology.** Santiago, Chile
Jan. 9-20	**Diagnostic X-Ray.** Cook County Graduate School of Medicine, Chicago
Jan. 9-20	**Practical Course in Cystoscopy.** Cook County Graduate School of Medicine, Chicago
Jan. 9-20	**Introduction to Radiological Safety.** New York University, NYC
Jan. 9-20	**Laryngology & Surgery of Larynx and Neck.** New York University, NYC
Jan. 9-20	**Radiological Health: Basic Course.** Taft Sanitary Engineering Center, Cincinnati
Jan. 9-Feb. 3	**Basic Course in Techniques of Using Radioisotopes.** Oak Ridge Institute of Nuclear Studies
Jan. 12-14	**Recent Advances in Clinical Medicine & Postgraduate Clinical Seminar.** Albany Medical College, Albany
Jan. 16-18	**Am. Coll. Surgeons.** Hotel George Washington, Jacksonville, Florida
Jan. 16-19	**Surgery.** U. of Kansas Medical Center, Kansas City, Kansas
Jan. 16-20	**Elementary Electrocardiography.** Mt. Sinai Hospital, NYC
Jan. 16-20	**Fluid & Electrolyte Balance.** Tulane University School of Medicine, New Orleans
Jan. 16-20	**Clinical Bronchoscopy.** Cook County Graduate School of Medicine, Chicago
Jan. 16-20	**Dermatology and Syphilology for Non-Dermatologists.** New York University, NYC
Jan. 16-20	**Refresher Course in Basic Urology.** New York University, NYC
Jan. 16-20	**Tuberculosis & Other Pulmonary Diseases in Childhood.** New York University, NYC
Jan. 16-21	**General Practice Review.** U. of Colo. Med. Ctr., Denver
Jan. 16-21	**Surgery of Sympathetic & Parasympathetic Nervous Systems.** New York University, NYC
Jan. 16-21	**Cardiology.** Southwestern Medical School of U. of Texas, Dallas
Jan. 16-21	**Seminar in Ophthalmology & Otolaryngology.** (U. of Miami). Sans Souci Hotel, Miami Beach
Jan. 16-27	**Pediatric Refresher Course.** New York University, NYC
Jan. 19	**Arthritis.** U. of Buffalo School of Medicine, Buffalo
Jan. 19-20	**Obstetrics.** U. of Nebraska College of Medicine, Omaha
Jan. 20	**Massive Gastrointestinal Bleeding.** Acad. of Med. Cleveland & Cuyahoga County, Cleveland
Jan. 23-24	**Chest Diseases.** U. of Kansas Medical Center, Kansas City, Kansas
Jan. 23-25	**International Medical Assembly of Southwestern Texas.** Municipal Auditorium, San Antonio
Jan. 23-27	**Advanced Electrocardiography.** Mt. Sinai Hospital, NYC
Jan. 23-27	**Anesthesiology: Endotracheal and Related Methods.** New York University, NYC
Jan. 23-28	**Pediatrics, Obstetrics & Gynecology.** U. of Michigan Medical School, Ann Arbor
Jan. 23-Feb. 3	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
Jan. 23-Feb. 3	**Practical Course in Cystoscopy.** Cook County Graduate School of Medicine, Chicago
Jan. 23-Feb. 4	**Basic Problems in Cancer Therapy.** New York University, NYC
Jan. 25-26	**Gastroenterology.** U. of Kansas Medical Center, Kansas City, Kansas
Jan. 25-27	**Geriatrics.** New York University, NYC
Jan. 25-27	**Diabetes & Basic Metabolic Problems.** Southwestern Medical School of University of Texas, Dallas

(Continued on page xxxv)

Editorials

FEDERAL HEALTH BUDGET, 1956

For the third time, in December, the Washington Office of the AMA has furnished figures that enable us to report the federal government's budget for health services. A year ago we pointed out that the rise in expenditures to be observed might be no more than apparent, for the items included clerical costs and other administrative expense that had not been properly allocated in earlier budgets. But the 1956 figures confirm our misgivings that federal spendings in these categories are on their way up, rather than down.

The report shows that this year the HEW Department, with almost a ⅓ increase, is to spend almost half a billion dollars on its health activities, an amount that is exceeded only by the spending of the Defense Department and the Veterans Administration for those purposes. The increase in HEW expenditures, $127,754,900, can be traced to sharp boosts in funds for Hill-Burton hospital construction, vocational rehabilitation, medical research and medical care for the indigent, plus a $30,000,000 appropriation for the purchase of Salk vaccine and for the financing of the inoculation campaign.

Total federal health spending during 1956 will reach a new high of more than $2,225,000,000. In case our readers' formal education hasn't included a course in mathematics of astronomy, perhaps we should translate that figure; it is two and a quarter billion dollars. It represents a 6.4 per cent increase over last year, and is 15 times the amount of money required to maintain Congress and the federal courts, 14 times the total budget for the State Department, and four times as much as is spent in a year by either the Department of Labor or the Post Office Department. Expressed in another way, it means that Uncle Sam puts up $15 out of every $100 spent by the American people, publicly or privately, for health and medical purposes, from the purchase of toothpaste to the financing of cancer research. Thus, dollarwise, health activities in this country are already ⅙ nationalized and socialized.

For the benefit of those of you who see fit to check up on us by digging out your copies of the December, 1954, JOURNAL, we should like to point out that in instances where the 1955 figures vary, between last year's tabulation and this one, the agencies evidently spent less than they had expected.

	1956	1955
Department of Health, Education and Welfare		
Division of Hospital Facilities	$ 112,250,000	$ 97,445,000
National Institutes of Health	97,823,000	81,267,500
Bureau of Public Assistance	90,000,000	85,000,000
Indian Health Activities	38,840,000	(new category)
Office of Vocational Rehabilitation	36,825,000	28,735,000
Hospitals and Medical Care	34,326,000	33,000,000
Children's Bureau	35,796,600	31,600,000
Poliomyelitis Vaccine Program	30,000,000	(new category)
Assistance to States—General	18,160,000	13,000,000
Food & Drug Administration	6,266,000	5,202,000
Tuberculosis Control	6,000,000	6,000,000
Communicable Disease Control	5,250,000	4,300,000
Engineering, Sanitation and Industrial Hygiene	4,690,000	3,565,000
Venereal Disease Control	3,500,000	3,000,000
Foreign Quarantine Service	3,000,000	2,900,000
Office of the Surgeon General	2,762,000	2,780,000
Alaska—Disease & Sanitation Investigations and Control	1,125,000	1,125,000
Reimbursable Health Program for Other Governmental Agencies	321,800	261,000
Total	$ 526,935,400	$ 399,180,500
Veterans Administration		
In-Patient Care in V-A Hospitals	615,869,000	567,974,991
Out-Patient Care	85,471,200	83,130,222
Modernization and Replacement Construction	30,000,000	47,000,000
Domiciliary Care	23,062,500	22,279,217
Contract Hospitalization	15,237,300	15,239,143
Medical Administration and Miscellaneous Operating Expenses	7,422,000	7,191,771
Medical Research	6,381,600	5,560,000
Major Alterations, Improvements & Repairs	3,900,000	3,480,000
Supply Depot Operations	1,642,200	1,654,000
Medical Education and Training	1,200,000	1,310,000
Total	$ 790,185,800	$ 754,819,344
Department of Defense		
Army Medical Services	300,000,000	325,000,000
Air Force Medical Services	286,000,000	280,000,000
Naval Medical Services	232,000,000	239,000,000
Office, Assistant Secretary of Defense (Health & Medical)	104,500	87,500
Total	$ 818,104,500	$ 844,087,500
Department of State		
United Nations Children's Fund	9,000,000	8,300,000
World Health Organization	3,349,790	2,987,667
Pan American Sanitary Bureau	1,320,000	1,320,000
Total	$ 13,669,790	$ 12,607,667
Department of Labor		
Bureau of Employees' Compensation	6,800,000	6,720,151
Bureau of Labor Standards	536,000	451,706
Total	$ 7,336,000	$ 7,171,857
International Cooperation Administration		
Technical Assistance Programs	20,141,000	16,925,900
Development Assistance Program	5,300,000	14,212,000
Total	$ 25,441,000	$ 31,137,900
Department of the Interior		
Bureau of Mines	5,000,000	5,035,189
Office of Territories	770,000	802,720
Total	$ 5,770,000	$ 5,837,909
Department of Commerce		
Civil Aeronautics Administration	223,486	256,333
Bureau of Standards	54,100	43,400
Total	$ 277,586	$ 299,733
Department of Treasury, Narcotics Bureau	2,990,000	2,770,000
Department of Justice, Prisons Bureau	1,470,000	1,277,362
National Science Foundation	5,000,000	3,600,000
Federal Civil Defense Administration	30,450,000	28,755,000
Atomic Energy Commission	27,700,000	26,800,000
Health Resources Advisory Committee	101,000	90,000
National Advisory Committee to Selective Service	180,000	147,444
Federal Employees' Health Program	6,000,000	6,000,000

Panama Canal Zone	5,702,900	5,800,503
Federal Trade Commission	1,000,000	1,000,000
Civil Service Commission	382,600	350,000
President's Committee for Employment of the Physically Handicapped	130,000	87,653
Grand Total	$2,268,826,576	$2,131,820,372

TRACTORS AND PROSTATITIS

The establishment of a division of agricultural medicine at the State University of Iowa has brought formal recognition to health hazards peculiar to the occupation of farming. This, in turn, has produced an increasing awareness of possible relationships between environmental physical, chemical and bacteriological agents and the problems seen daily in rural practice.

One of these, prostatitis, has no direct etiologic relationship with any of the above agents, but its increased incidence during seasonal peaks in farm work is most suggestive of an indirect occupational relationship. It has long been apparent that individuals engaged in driving heavy equipment and who, for that reason, are seated for long periods of time, are particularly susceptible to prostatitis. Many of us are familiar with the "jeep seat" syndrome of World War II, which of course was a prostatitis and urethritis, non-specific. The bacterial agent responsible must necessarily be present to produce such an illness, but the physical factors consequent to the maintenance of a fixed position—stasis, vascular engorgement and edema—combine with continuous pounding trauma to bring on the acute syndrome.

In the spring and fall, the farmer spends long hours on a tractor, bouncing back and forth over rough terrain. His always being in a hurry only adds to the trauma of his ride. It is usually at the end of such a day that the perineal aching, dysuria and, perhaps, chills and fever of prostatitis become manifest.

The incidence of this condition is not great enough to warrant an all-out public health drive, but to an individual so afflicted the loss of a week or more of his most valuable time may produce a disastrous season. Prophylaxis, then, becomes of paramount importance to a susceptible individual.

Short of changing occupations, there are several measures that the farmer can adopt as safeguards:

1. Improved tractor seats of the hydraulic type, with an added foam rubber ring or cushion

2. Avoidance of excessive trauma by using less speed, and judicious avoidance of the roughest terrain

3. Frequent "breaks" for position change and exercise

4. Seasonal prophylactic chemotherapy, perhaps, for those who have had repeated episodes or particularly incapacitating illnesses.

MENTAL ILLNESS FILM IN AMA LIBRARY

A motion picture entitled "Videclinic: Mind and Medicine" has been added to the AMA library and can be borrowed for showing at county medical society meetings. A kinescope of a program originally produced for closed-circuit television, it covers many of the problems associated with mental illness. The showing time is 46 minutes.

PROPHYLAXIS FOR NECK PAINS

Dr. Howard P. Rome, of the Division of Psychiatry at the Mayo Clinic, has recently published* some addenda to his remarks on "the difficult patient" which the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY had the privilege of printing last January.

Every physician, and particularly the man who is just setting up his practice, is confronted with the type of people whom he calls "shoppers." These are the patients who move from doctor to doctor in search of the words they want to hear. If a doctor criticizes a diagnosis that another physician has given, such individuals complain loudly to their friends about that predecessor's "mistake" or sue him for damages. "Shoppers," Dr. Rome says, "should be firmly urged to return to their own doctors, unless they have actually terminated the earlier doctor-patient relationship."

Another species of difficult patient is the "talker," the sort of person who sabotages the appointment schedule by taking up more than his share of the physician's time. Dr. Rome suggests that receptionists be instructed to warn their doctors by some means whenever they bring a "gabby" man or woman to the consulting room and that they be told to interrupt the interview before an excessive length of time has elapsed.

The M.D. should protect himself, Dr. Rome believes, whenever a patient seems to take delight in disobeying instructions. Under those circumstances, the doctor should disclaim responsibility for the consequences of the patient's failure to cooperate, and preferably, he should put that disclaimer in writing.

"In most cases," he concludes, "problem patients can be turned into amiable, cooperative patients. Each difficult patient presents a challenge to a physician's dexterity in human relations."

* J.A.M.A., **159**:486, (Oct. 1) 1955.

Attend the Annual Meeting of the Iowa State Medical Society, April 22-25, 1956, in Des Moines.

Summary of Testimony in the

Hospital—Physician Trial

After more than 2,000,000 words of testimony from a total of 50 witnesses, the 13-week trial of Iowa's hospital-physician lawsuit has ended.

Near the close of the lengthy, complicated trial, Mr. Philip H. Cless, an attorney for the Iowa State Medical Society and the other physician groups involved in the suit, commented that "this case may well be a crossroad in medicine and patient care."

It is understandable that such importance has been attached to the litigation, for the issues involved boil down to this essential question: "Do hospitals have the legal right to sell the services of pathologists, radiologists and other physicians?"

The lawsuit seeking to establish that right was filed January 31, 1955, by the Iowa Hospital Association. The filing amounted to a challenge of a 1954 opinion of Iowa's Attorney General that hospitals hiring medical specialists and charging patients for their services are practicing medicine illegally.

The IHA lawsuit was filed against the office of the Attorney General, the Iowa State Board of Medical Examiners and the Iowa Association of Pathologists. Almost immediately, the Iowa State Medical Society intervened in the case on the side of the defendants.

The lawsuit was tried in Polk County District Court, Des Moines, before Judge C. Edwin Moore. Attorneys for the IHA were Mr. A. A. Herrick, Mr. Herschel G. Langdon and Mr. David Baker. The physicians were represented by Mr. Cless and by Mr. John Blanchard.

The trial began on May 19 and recessed June 28 for summer vacation. It resumed September 15, and the case was finally submitted for Judge Moore's consideration on November 4.

THE BACKGROUND

Events leading up to the filing of the suit were outlined during the course of the trial by Dr. Walter D. Abbott, a Des Moines neurosurgeon who is chairman of the ISMS Committee on Medical Practice in Hospitals. He appeared as a witness for physicians involved in the lawsuit.

Dr. Abbott testified that the hospital-physician controversy in Iowa "dates back to the introduction of the Blue Cross Comprehensive 70 contract late in 1949." This contract, he testified, provides "full payment for medical services such as X-ray, pathology and anesthesia when these services are billed by the hospital." But he added that the contract is "discriminatory" for it does not cover the "services of a doctor of medicine who does not accede to being classified as a hospital employee."

The first official action against this contract was taken by physicians in April, 1952, Dr. Abbott testified, when the House of Delegates of ISMS asked the board of directors of Iowa Medical Service (Blue Shield) to study the extension of Blue Shield benefits to include radiology, pathology and anesthesiology. Such an extension, it was felt, would relieve Blue Cross of the responsibility for covering those medical services.

The House of Delegates of the American Medical Association, in St. Louis late in 1953, he said, "resolved that the AMA condemns all insurance contracts which classify any medical service as a hospital service."

Prompted by this AMA resolution, Dr. Abbott said, the Executive Council of ISMS, on January 7, 1954, resolved to appoint a five-man committee to meet with a similar hospital group to negotiate the transfer of such services from Blue Cross to Blue Shield. It was determined at the same time that should negotiations fail, "the Executive Council of the ISMS will support legal action challenging the right of hospitals or corporations to practice medicine."

In February, 1954, the opinion requested by the Iowa State Board of Medical Examiners was handed down by Attorney General Leo A. Hoegh, now Iowa's governor.

Negotiations between the ISMS and the IHA began in March, 1954, and continued until December of that year, but the two groups were unable to agree upon a contract form that would meet the legal demands of the Attorney General.

Dr. Abbott testified that the ISMS and the IHA "came reasonably close to a settlement" after the Attorney General had drafted a compromise agreement from suggestions of each side. But the IHA refused to concede two points which the ISMS has always maintained: "that all of radiology and pathology services contribute to the diagnosis and treatment of illness and that every facet of this work constitutes the practice of medicine."

In addition, the IHA "felt that radiologists and pathologists should not be permitted to bill for their services rendered to hospitalized patients" whereas the ISMS "believes that patients must be billed in a manner which will inform them that they are paying for services of physicians, and that any other approach amounts to secret division of fees—which is not only unethical but also illegal in Iowa."

A final attempt to settle the controversy was

made during a Chicago meeting with officials of the AMA and AHA, but this attempt also failed. Filing of the lawsuit followed.

THE HOSPITALS' CASE

Knowing that it could be claimed that hospitals practice medicine if their employees or agents practice medicine, attorneys for the IHA, in the early days of the trial, were forced into the position of attempting to show that pathologists do not practice medicine.

Dr. Charles V. Letourneau, former assistant director of the American Hospital Association and at present director of Northwestern University's program of hospital administration, testified flatly that pathology "is not the practice of medicine." He testified that "the pathologist identifies facts." And, he added, "The pathologist never makes a decision on the patient. The pathologist merely offers facts to the attending physician, and these facts may be accepted or rejected according to the judgment of the attending physician."

But by the trial's end, after a parade of medical witnesses had testified that pathologists and radiologists *do* practice medicine, attorneys for the IHA were arguing that "even if what the pathologist does is the practice of medicine, it is so much a part of hospital service that the two cannot be separated."

During his opening argument, Attorney Herrick said pathologists "are demanding that hospitals surrender these laboratories, built with public funds, to be exploited for private gain."

This line was followed in the testimony of Mr. Donald Cordes, administrator of Iowa Methodist Hospital, Des Moines. He said that laboratories would be "ripe for exploitation" by pathologists "who are interested in their pocketbooks" if the laboratories were separated from hospital control. He added that it would be "essentially dishonest" for a pathologist to bill a hospitalized patient for laboratory services, and that "I would consider it essentially dishonest for any doctor to bill for the services . . . with which he had only partial supervision. It would be just as dishonest for the administrator of the hospital to bill in his name for the work of those 26 technicians [employed in the Iowa Methodist Hospital laboratory] because I also supervise those technicians. . . ."

Two clinical chemist witnesses, John Reinhold, Ph.D., of Philadelphia, and Max Friedman, Ph.D., of New York City, secretary of the American Association of Clinical Chemists, testified that a doctor of philosophy is more qualified than a pathologist to supervise the work of some sections of the hospital laboratory.

Witnesses were called from various sizes of hospitals in the state to discuss the financial conditions of their institutions and their contractual relationships with pathologists. Members of several boards of trustees testified that it would be difficult to obtain contributions for their hospitals if laboratories were operated "by pathologists for private gain." To counter this contention of the hospital trustees who testified, witnesses for the doctors pointed out that almost all physicians receive a considerable amount of their income from treating patients in hospitals and, for example, surgeons receive practically all of their income from treating hospitalized patients.

The last witness to testify in the presentation of the IHA case was Mr. Louis B. Blair, administrator of St. Luke's Methodist Hospital, Cedar Rapids. He testified that "giving independence to the operation of vital segments of the hospital" by leasing pathology and radiology departments to physicians as suggested by the Attorney General "would have a very serious impact on the effectiveness of the services of the hospital."

Under Mr. Cless's cross-examination, it was pointed out to Mr. Blair that St. Luke's contract with its pathologist recognizes that the operation of the laboratory "is fundamentally the practice of medicine" and that "physicians rely on the laboratory for diagnosis, prognosis and the treatment of disease." Mr. Cless asked Mr. Blair whether he were still "agreeable" to those two statements. Mr. Blair replied, "No, sir."

It was on that note that the IHA closed the presentation of its case.

After hearing and questioning the 25 witnesses presented by the ISMS, however, and after obtaining the IHA testimony of rebuttal witness Dr. Albert Snoke, president-elect of the AHA and administrator of Grace New Haven Community Hospital, New Haven, Connecticut, the hospital attorneys apparently softened their stand that pathology is not the practice of medicine and that laboratories perform no medical services.

Emphasizing that he was not an official representative of the AHA during his three days as a trial witness, Dr. Snoke made a strong plea for "flexibility" in contractual arrangements between hospitals and medical specialists. "I am convinced," he said, "that there should be varying arrangements. If we were to try to lay out one specific pattern and say that this is the way it must be followed, without any question at all, the care of the patient would suffer. It might be the very best thing in the world for the patients in one area, but it might be the most complicated and the most difficult thing to do in another area." Dr. Snoke testified that in his opinion, since he is a doctor of medicine, he is practicing medicine as a hospital administrator, and that since a layman can have the same responsibilities as a hospital administrator, he believed that either he is wrong in thinking he is practicing medicine or the lay hospital administrator is practicing medicine illegally.

He called arguments that hospitals will enter

the general practice of medicine if they are allowed to practice pathology and radiology "completely and utterly nonsense."

CONCLUSIONS OF HOSPITALS' COUNSEL

After the last witness had been heard, attorneys for the IHA suggested that Judge Moore refrain from deciding the precise limits of the practice of medicine, but should draw four conclusions from the trial's evidence:

"(1) The ownership, operation and maintenance of laboratory and X-ray facilities, including the employment of non-medical personnel . . . are essential and integral parts of the lawful activities of a hospital. . . .

"(2) The laboratory and X-ray facilities of a licensed hospital under present regulations must be operated under the direction and supervision of a licensed physician and no hospital has the right, directly or indirectly, to direct, control or interfere with the professional acts and duties of the physician in charge of the laboratory or X-ray facilities.

"(3) A non-profit licensed hospital and the physician or physicians who supervise and direct the laboratory and X-ray facilities may legally enter into any contract for compensation of each upon which they may mutually agree, including . . . a straight salary, a percentage contract or lease arrangement, or any combination of the foregoing. . . .

"(4) A non-profit hospital and a licensed physician who is in charge of its laboratory or X-ray facilities may legally enter into any mutually satisfactory contract or arrangement for the billing and collection of charges made to the patient for services rendered in said departments."

It is interesting to note that the findings of fact and conclusions of law submitted by the hospitals to Judge Moore—and, of course, they were worded as strongly as possible—were substantially the same provisions that were contained in the consent decree which the hospitals disseminated widely during October and which they represented as being a fair and reasonable proposal for settlement. The officers of the ISMS were cognizant of the fact that acceptance of that consent decree would have caused the Medical Society to retreat from a position which it considered to be right.

Attorneys Herrick and Langdon, in their closing arguments, said a court-ordered compliance with the Attorney General's opinion would "put the hospitals in a legal and economic straight-jacket" that would "mean the beginning of the disintegration of the hospital." They added that hospital operation of pathology and radiology departments for over 30 years was "strong evidence" of legality, and they asked Judge Moore to place a "practical construction" on Iowa's medical practice acts to permit continued operation of the departments by hospitals.

Mr. Langdon argued that "the only real prohibition" of the acts "is the selling of medical services by a corporation *for a profit*." He insisted that "the charitable, non-profit hospitals . . . are not furnishing or selling such services for a profit [and so] are entitled to be exempt from any prohibition of the medical practice acts."

THE PHYSICIANS' CASE

In his opening statement before Judge Moore, Mr. Cless said, "The simple issue here is whether or not corporations or lay groups may practice medicine." He added that radiology and pathology "are both recognized medical specialties" and that the employment of these specialists by hospital "constitutes the sale of medical services for a profit." The ISMS and its attorneys did not back away from that stand during the entire course of the trial.

The first witness for the physicians was Dr. F. C. Coleman, pathologist at Mercy Hospital, Des Moines, and president of the Iowa Association of Pathologists. He testified that, "Pathologists often hold consultations with attending physicians." The IHA had argued that because such consultations are "rarely if ever" held, the pathologist cannot be said to be practicing medicine. The pathologist's activities, Dr. Coleman said, are a vital part of medical care, so "it is necessary the laboratories be headed up by doctors of medicine."

"Many pathology tests are diagnostic," he continued. "If District Judge C. Edwin Moore rules against the doctors and overrules the Iowa Attorney General's ruling, I do not believe there would be anything to prevent them [the hospitals] from establishing such departments as surgery, obstetrics or pediatrics."

Dr. Richard F. Birge, of Des Moines, later offered additional testimony on this subject. Dr. Birge is secretary of the Iowa State Board of Medical Examiners and of the Iowa State Medical Society. He testified that a "trend" towards "expansion of hospitals' practice of medicine" is pointed up by the growing number of hospital-operated divisions of radiology, pathology, electrocardiography, electroencephalography, psychiatry, anesthesiology and physical therapy.

A number of other physicians appeared to support Dr. Coleman's testimony that pathologists hold regular consultations with attending physicians. These witnesses included Dr. N. W. Irving, Jr., Des Moines radiologist; Dr. Lee F. Hill, Des Moines pediatrician; Dr. D. F. Crowley, Jr., Des Moines surgeon; Dr. C. A. Sones, Des Moines internist; Dr. Thomas Scales, Des Moines internist; and Dr. Allan B. Phillips, Des Moines radiologist. Dr. Phillips said such consultations are "frequently" held as a "joint, cooperative effort on the part of all the physicians involved to do the best for the patient."

Radiologists who testified also said that radiol-

ogy is diagnostic as well as therapeutic, and that there can be no doubt that the practice of radiology is the practice of medicine.

Attorneys for the ISMS spent considerable time showing the court that laboratories in the hospitals would be more efficient if they were under the complete control of physicians. As much time was spent on the proposition that each physician —acting under moral, ethical and legal requirements—should bill patients in his name.

Early in the presentation of the physicians' case, Dr. Coleman was asked under cross-examination: "Tell us why you want to include in your personal bill the charges that you admit the hospital should receive [as payment for space and equipment used by the laboratory]." Dr. Coleman replied, "If the hospital is going to supply these aids to the doctor," they should be paid for by the doctor because they would be "aids to the provision of professional service."

He later testified that hospital services in the laboratory "are so entwined with the practice of pathology that they can't be separated" to make divided billings by the pathologist and the hospital possible.

Dr. Phillips, testifying under cross-examination, was asked: "If you say it's wrong for the hospital to bill patients for your services, isn't it just as wrong for you to bill the patient for hospital services?" He replied, "I consider the entire [radiologic] examination a medical act, the practice of medicine. And as such, it should be billed by the doctor." The physician, he said, should in turn "adequately compensate the hospital for the things it supplies."

Dr. Lall G. Montgomery, a Muncie, Indiana, pathologist, testified that laboratory technicians "are doing things for the pathologist that he would ordinarily do himself, so the pathologist has to have complete control over his staff." He went on to say that "complete control" is impossible when the technicians are employees of the hospital.

Dr. C. Ray Phelps, Ottumwa pathologist, testified that physicians working in laboratories that they do not completely control often find they "must demonstrate the need for new equipment" to the hospital board of trustees. The pathologist who has complete control, he added, could simply go out and buy the equipment.

Pathologists who do not have actual control of their laboratories, he added, often must retain poorly qualified technicians foisted upon them by hospital administrators. Dr. Phelps concluded that the "only way" a pathologist could obtain complete control of his laboratory would be a space-lease arrangement with the hospital. Medical and hospital services in the laboratory, he added, "could not be separated, [and therefore] they should be billed as a diagnostic service."

A number of witnesses, including Dr. Coleman and Dr. Montgomery, testified that there would be no justification for an increase in fees if laboratories were controlled by physicians.

The long trial's most eloquent plea for complete professional control of laboratories in hospitals was made by Mr. Cless during his closing arguments before Judge Moore. He said that most hospital-physician relationships to date have been satisfactory, but he insisted that they have been so "by grace, and not by contract." Physicians through the years, he said, have been more interested in patient care than in legal relationships with hospitals. The contractual arrangements that have evolved from this inattention by physicians, he added, could lead to oppression and interference with professional functions.

Mr. Cless pointed out that "in every instance" when hospital financial statements had been examined during the trial, they had shown that "laboratories and radiology departments have been making money for the hospitals." He insisted that "there is an exploitation of the patient in the sale of these services" when the hospitals make a profit.

He argued that the "secret goal" of the hospitals is the general practice of medicine through the efforts of hired physicians. He maintained that only a strict interpretation of Iowa's medical practice acts could prevent such an occurrence.

CONCLUSIONS OF PHYSICIANS' COUNSEL

Mr. Cless suggested that Judge Moore logically should arrive at these conclusions in determining the outcome of the litigation:

"Persons shall be deemed to be engaged in the practice of medicine who publicly profess to assume the duties incident to the practice of medicine, persons who prescribe or furnish medicine for human ailments and persons who act as representatives for any person doing the things mentioned.

"Physicians must be licensed and . . . a corporation cannot be licensed to practice medicine.

"It is the law of this state . . . that the learned professions, embracing at least law and medicine, cannot be practiced by a corporation through the purveyal or sale of professional services. . . .

"The fact that the corporation so conducting such sale or purveyal is of a non-profit character or even charitable in its nature makes no difference since the basic reason for the rule—that the professional person should owe no duty to anyone other than to the patient himself—applies equally in the case of non-profit organizations and those for profit.

"If in fact the corporation or lay body has an arrangement whereby it may sell or hold itself out as being able to sell the professional services of the physician, it is engaged in the corporate or lay practice of medicine.

"Pathology and radiology are recognized specialties in the practice of medicine.

"The acts of the technicians are essentially those of their physician supervisors.

"[The physician's control of a laboratory] is

diminished by the hospital's employment and compensation of technicians, its provision of equipment and supplies and its establishment of fee schedules.

"[Under definitions in state law, a hospital] constitutes a place for the practice of medicine by physicians, and [state law] does not in any way authorize the hospital to undertake medical practice, including the operation of laboratory and X-ray departments.

"The hospital should not be vested with any ability to interefere with or dictate the professional work of the pathologist and radiologist or of the laboratories and X-ray departments under their supervision.

"The product of the pathologist and his laboratory and the radiologist and his department is a professional medical service to the patient. He should be in complete and absolute control of all the ingredients of that product."

District Court Judge C. Edwin Moore's

Decision in the Hospital-Physician Trial

IN THE DISTRICT COURT OF THE STATE OF IOWA IN AND FOR POLK COUNTY

No. 63095 Equity
Findings of Fact and Conclusions of Law

Iowa Hospital Association, a corporation;
Sisters of Mercy, Cedar Rapids, Iowa, a corporation, operating Mercy Hospital, Anamosa, Iowa, Mercy Hospital, Cedar Rapids, Iowa, and Mercy Hospital, Oelwein, Iowa;
St. Anthony Hospital, Carroll, Iowa, a corporation;
St. Luke's Methodist Hospital, Cedar Rapids, Iowa, a corporation;
Sisters of Mercy of Council Bluffs, Iowa, a corporation, operating St. Joseph's Mercy Hospital, Centerville, Iowa, Mercy Hospital, Council Bluffs, Iowa, and Mercy Hospital, Des Moines, Iowa;
Jane Lamb Memorial Hospital, Clinton, Iowa, a corporation;
Rosary Hospital, Corning, Iowa, a corporation;
Womens Christian Association of Council Bluffs, a corporation, operating Jennie Edmundson Memorial Hospital, Council Bluffs, Iowa;
Crawford County Memorial Hospital, Denison, Iowa, and T. C. Aarestad, Julius Rohwer, Allan Nash, Joseph Smith, H. Ray Hayes, Mrs. Clara Huber and August Nehls, Trustees of Crawford County Memorial Hospital, Denison, Iowa;
Iowa Lutheran Hospital, Des Moines, Iowa, a corporation;
Iowa Methodist Hospital, Des Moines, Iowa, a corporation;
Sisters of St. Francis, Clinton, Iowa, a corporation, operating St. Francis Hospital, Grinnell, Iowa;
Guthrie County Hospital, Guthrie Center, Iowa, and Harold V. Beach, Mrs. Ethel Seidler, Mrs. Lavern Kindred, Lance Wickland, A. D. Brandt, B. H. Helterbrand, and Frank B. Wilson, Trustees of Guthrie County Hospital, Guthrie Center, Iowa;
Ellsworth Municipal Hospital, Iowa Falls, Iowa, and Norman Christenson, Don W. Barker and Mrs. Elmer Ackerman, Trustees of Ellsworth Municipal Hospital, Iowa Falls, Iowa;
Evangelical Hospital, Marshalltown, Iowa, a corporation;
Mercy Hospital, Marshalltown, Iowa, a corporation;
Muscatine County Hospital, Muscatine, Iowa, and W. G. Eichenhaur, Robert L. Roach, Harold Nicolaus, F. A. Kirchner and Vernon Thede, Trustees of Muscatine County Hospital, Muscatine, Iowa;
Mitchell County Memorial Hospital, Osage, Iowa, and G. Fabricius, W. E. Sheldon, Howard Lack, Riley Sloan, Robert Feldt, A. Byron Goldberg and Louis Ethen, Trustees of Mitchell County Memorial Hospital, Osage, Iowa;
Mahaska County Hospital, Oskaloosa, Iowa, and Frank G. Randell, Raymond Slitely, Harry Phillips, D. L. Akerman, Harold Mayer, W. W. Shaw and George Doops, Trustees of Mahaska County Hospital, Oskaloosa, Iowa;
Ottumwa Hospital Association, a corporation, operating Ottumwa Hospital, Ottumwa, Iowa;
Sisters of the Humility of Mary, a corporation, operating St. Joseph Hospital, Ottumwa, Iowa;
Murphy Memorial Hospital, Red Oak, Iowa, and Thomas C. Murphy, Oscar Shepard and R. John Swanson, Trustees of Murphy Memorial Hospital, Red Oak, Iowa;
Hand Community Hospital, Shenandoah, Iowa, a corporation;
Lutheran Hospital Society of Jackson County, a corporation, operating Bellevue Memorial Hospital, Bellevue, Iowa;
Mercy Hospital, Davenport, Iowa, a corporation;
St. Luke's Hospital, Davenport, Iowa, a corporation;
Holy Family Hospital, Estherville, Iowa, a corporation;
Lutheran Hospital of Fort Dodge, Iowa, a corporation;
Palmer Memorial Hospital, West Union, Iowa, and Reverend G. Goeken, Reverend E. C. Franke, Milton Eide, Mrs. Viola Shori, R. C. Lemke, Harry Stalle and Grant Lauer, Trustees of Palmer Memorial Hospital, West Union, Iowa;
Story County Hospital, Nevada, Iowa, and Col.

H. E. HADLEY, ROBERT E. WALTERS, HAROLD T. FARCETT, SAM SWITZER, D. E. JOHNSON, MARTIN H. TROUP, and DONALD C. ROSS, Trustees of Story County Hospital, Nevada, Iowa;

GREENE COUNTY HOSPITAL, Jefferson, Iowa, and MAE MCWILLIAM, ROBERT P. MILLIGAN, CHARLES STINE, ZOLA BLAYLOCK, C. A. LOFSTEDT, J. WARREN DUFF and S. J. THORNTON, Trustees of Greene County Hospital, Jefferson, Iowa,

Plaintiffs,

vs.

IOWA STATE BOARD OF MEDICAL EXAMINERS, and GEORGE H. SCANLON, M.D., FRANK R. PETERSON, M.D., R. F. BIRGE, M.D., H. E. FARNSWORTH, M.D., and JOHN W. BILLINGSLEY, M.D., Members of the Iowa State Board of Medical Examiners; IOWA ASSOCIATION OF PATHOLOGISTS, FRANK C. COLEMAN, M.D., President, RICHARD F. BIRGE, M.D., Secretary, and DAYTON COUNTRYMAN, Attorney General of the State of Iowa (in his official capacity),

Defendants,

IOWA STATE MEDICAL SOCIETY,

Intervenor.

This cause came on for trial and hearing before the Court May 19, 1955, and evidence was taken through June 28, 1955. Whereupon, trial was adjourned until September 15, 1955, and continued through October 25, 1955, at which time the record was closed. The Plaintiffs were represented by Herrick, Langdon & Sidney, Des Moines, Iowa, and O. W. Harris, Jefferson, Iowa. The Defendants were represented by Dayton Countryman, Attorney General of Iowa; Clarence A. Kading, Assistant Attorney General of Iowa; Philip H. Cless, Special Assistant Attorney General of Iowa, and Lehmann, Hurlburt, Blanchard & Cless, Des Moines, Iowa, and Intervenor was represented by Lehmann, Hurlburt, Blanchard & Cless, Des Moines, Iowa.

The Court having on November 2, 1955, heard the statements and arguments of counsel and having heard and considered the evidence adduced, and examined the exhibits and printed briefs, does hereby make the following Findings of Fact and Conclusions of Law as to the issues embraced in the pleadings of the parties.

A great volume of evidence on many issues has been offered during the many weeks of the trial of this case, but the Court recognizes the action of the Plaintiffs and those represented by the counterclaims of the Defendants and Intervenor are antagonistic efforts for favorable declaratory relief on the following major issue: whether or not the Plaintiff hospitals are engaged in the illegal corporate practice of medicine in purveying to patients in said hospitals medical services in the form of laboratory procedures and X-ray procedures for compensation. The Court makes the following:

FINDINGS OF FACT

1. The Plaintiffs, other than the Iowa Hospital Association, are all operated by nonpecuniary profit corporations or, in the case of County hospitals, certain trustees holding the powers contained in Chapter 347 of the Code or, in the case of Municipal hospitals, certain trustees possessing the powers contained in Chapter 380 of the Code. For the purposes of this case, the Court finds it unnecessary to treat the three types of hospitals separately.

2. That the major part of the physical facilities of plaintiff hospitals has been provided through charitable contributions or public funds and the respective governing board members are generally leading citizens of their respective communities and serve as trustees without compensation.

3. Each of the Plaintiff hospitals is a member of the Plaintiff, Iowa Hospital Association, and is the holder of a license under Chapter 135 B of the Code.

4. Each of the Plaintiff hospitals, pursuant to Hospital Regulations 26 and 27, many pursuant to Standards of Accreditation of the Joint Commission on Accreditation of Hospitals, some pursuant to the standards of the Council on Medical Education and Hospitals of the American Medical Association for intern training, for residency training or for technician training, and in accord with modern medical practices, have, either in the hospital itself or through arrangements with nearby hospitals or laboratories, pathology laboratory facilities for these services, that all such facilities are under either the stated supervision of a pathologist or other physician, and that each such hospital has either X-ray facilities in the hospital or available in the immediate community sufficient for radiography, fluoroscopy and the development of films.

5. The Court finds that pathology and radiology are recognized specialties in the practice of medicine.

6. The Court further finds that in the case of the pathology laboratory facilities, the larger hospitals have arrangements for the services of either full or part time pathologists to be in charge thereof, but that in some of the smaller hospitals, the supervision of the stated physician is in name only and that the actual laboratory work proceeds in the hands of lay technicians, with or without actual supervision by a doctor of medicine. The Court finds it unnecessary to differentiate between the several situations presented in the evidence in this respect.

7. In the case of radiology, the Court finds that all of the Plaintiff hospitals are served either on a full or part time basis by a radiologist, except perhaps one, the case of Guthrie County Hospital, Guthrie Center, Iowa, which mails film for interpretation by the radiologist. The Court finds it unnecessary to distinguish between the types of service offered.

8. The Court finds and the evidence shows that in each of the Plaintiff hospitals the practice of medicine is undertaken by a medical staff in which is included the pathologist and radiologist when these physicians have either a full or part time arrangement with the hospital.

9. The Court further finds that each of the Plaintiff hospitals undertakes to admit patients of members of the medical staff and charges said patients for the services provided, which in the case of laboratory or X-ray procedures include fees therefor, except in the case of Evangelical Hospital, Marshalltown, Iowa, as to radiology, in which instance the radiologist bills the patient.

10. The Court further finds that when the services of a pathologist or radiologist have been engaged on either a full, part time or per case basis, that the Plaintiff hospitals compensate said physician under variable arrangements, including salary, percentage of the gross or net income of the department or a fixed fee per item of service performed, except in the case of the Plaintiff Evangelical Hospital, Marshalltown, Iowa, where the radiologist is compensated by

direct billing of the patient and accounts to the hospital for such provision as the hospital furnishes him in the work. The Court finds it unnecessary to separately make findings as to the different types of arrangements whereby the Plaintiff hospitals compensate the pathologist or radiologist, but must make the observation that under each arrangement the doctor and hospital do very well financially. In all instances where the departments are only purportedly under the supervision of a local physician, he receives no compensation therefor.

11. The Court further finds that laboratory medicine and radiology in their several branches are indispensable to attending physicians in modern medical care, and that facilities must be available in or near hospitals, and that the ownership and maintenance of laboratory facilities is an integral part of a modern hospital.

12. The Court further finds that in each of the Plaintiff hospitals technicians are provided as employees of the hospital, except in a few instances, but that in all said hospitals, the technicians are under the control and supervision of the pathologist or radiologist or, in their absence, under at least the purported control of the appointed physicians, and that where such control is actual, the technicians in performing actual procedures in the pathology laboratory and in taking X-ray films, preparing patients therefor and in assisting the radiologist in the X-ray department, are all performing functions which the pathologist or radiologist, as the case may be, would otherwise personally perform, and that said technicians in the conduct of the procedures are, in fact, serving as the hands of the pathologist, radiologist or other physician in charge.

13. The Court finds that when these services are not under actual physician control and supervision, the quality of the services may suffer.

14. The Court further finds that in all the Plaintiff hospitals, pathology laboratory procedures are undertaken in seven categories, to-wit: (1) bacteriology, (2) blood bank and serology, (3) biochemistry, (4) hematology, (5) urinalysis, (6) special tests, and (7) pathologic anatomy, and that determinations offered are as many as 125 in number, although in many hospitals, facilities may be available for only a portion of said procedures, in which event the additional determinations are made in other pathology laboratories and reported to the hospital which makes the charge to the patient in the same manner as though made in the hospital in question. The first six categories of determinations are very frequently actually performed by lay technicians who report in writing, although they may be performed by the pathologist or other physician or subject to his review or interpretation. Specimens for these procedures are frequently obtained by technicians and may require the collection of blood by venipuncture or other means requiring special precaution, skill and training. The record shows that tissue diagnosis following surgery by gross and microscopic examination or by frozen section examination is invariably performed by a pathologist, as are bone marrow studies, blood smears and numerous other types of slides and special studies. The evidence shows that in hospitals not having either full or part time service of a pathologist, that the surgical tissue examinations of all types, as well as bone marrow and blood smear and other studies, are handled on a mail or delivery basis by a pathologist in a nearby city, the specimens being sent or brought him, with him making the diagnostic report by mail in the regular way and in some instances additionally providing his diagnosis by telephone, and that he is compensated by the hospital on a per case or examination basis, which hospital in turn bills the patient and the evidence shows that in some instances the hospital bills the patient for more than the pathologist bills the hospital, the extra amount stated to represent the cost of mailing and handling. The evidence further shows that the attending physician expects the pathologist, if one is in attendance, to be available for consultation as to the indications, need or advisability for certain procedures, the interpretation of the results thereof, and recommendations of indicated therapy. All of these services are for the purpose of establishing an accurate diagnosis and outlining a proper course of treatment. In hospitals where no pathologist is available the evidence shows that consultation often exists between the attending physician and the lay technician for the same purposes, it being the aim of modern medicine to bring to the patient's benefit the full diagnostic and treatment function of the laboratory to the highest degree possible. The Court further finds that the ordering of laboratory procedures by the attending physician is generally regarded as a request to the pathologist himself and constitutes an invitation for consultation and in the absence of the pathologist, to the physician designated or lay head of the laboratory, and that the laboratory report of the determination is, in fact, the report of the pathologist, if there be one, or of the physician or lay head of the laboratory to the attending physician.

15. The Court further finds that the determinations in pathologic anatomy are diagnostic and of great value to the patient in the determination of the course of treatment both during and after surgical operation, and that in many instances the postoperative tissue examination provides the final diagnosis in the case. The Court finds that as to other laboratory determinations, many of them represent diagnostic conclusions on the part of the person performing the procedure, known and appreciated by him, and that in all such determinations, the person performing the test forms a conclusion as to normality or abnormality which the Court finds to be a diagnostic conclusion. In this respect, the Court notes that in a common type of pathology laboratory report form in use in many of the Plaintiff hospitals, the range of normality is printed thereon for the aid and assistance of all those interested in the report, including the technician who may have performed the procedure. The evidence shows that among all categories of determinations, some, when abnormality is found, identify the disease or the cause thereof, and as such may become the final diagnosis in the case because they are often adopted by the attending physician. The Court further finds that some of the procedures performed by technicians serve as controls of treatment, such as typing and crossmatching of blood and determining the sensitivity of bacteria to antibiotics, determining the need for blood transfusion or X-ray therapy by means of blood counts, controlling dosage of sulfa drugs by urinalysis, and that the patient's life may depend on the accuracy of these controls of treatment. Serious harm to the patient may result if they are not carefully performed.

Solid reasons for prescribing

ACHROMYCIN*

Hydrochloride
Tetracycline HCl *Lederle*

For nearly two years, ACHROMYCIN has been in daily use. Thousands of practicing physicians in every field have substantiated its advantages, and the confirmations mount every day.

In any of its many dosage forms, ACHROMYCIN has proved to be well tolerated by patients of every age. It provides true broad-spectrum activity, rapid diffusion, and prompt control of a wide variety of infections caused by Gram-negative and Gram-positive bacteria, rickettsia, and certain viruses and protozoa.

ACHROMYCIN—an antibiotic of choice, produced under rigid controls in Lederle's own laboratories.

LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* PEARL RIVER, NEW YORK

*REG. U.S. PAT. OFF.

Lederle

wide-spectrum activity

prompt control of infection

rapid diffusion

negligible side effects

16. The Court further finds that diagnostic X-ray and radioactive isotope procedures often provide the final diagnosis of the patient's ailment and that fluoroscopy undertaken by the radiologist has the same result, and that the written radiological diagnosis will usually be adopted by the attending physician as the final diagnosis in the case. The evidence shows without controversy that X-ray therapy and therapy with radioactive isotopes are commonly accepted therapeutic procedures for certain ailments, especially cancerous conditions, and that these services are available in many of the Plaintiff hospitals and where so found, the charge therefor to the patient is being made by the hospital. The Court further finds that the work of the radiological technician in filming patients includes the invasion of the patient's body with a lethal agent requiring experience, skill and training and should always be done under the control and supervision of a medical physician.

17. The Court further finds that a medical consultation has no particular formality or plan, but the Court finds and the evidence shows that hospitals and attending physicians expect pathologists and radiologists, and in the absence of pathologists even the laboratory technicians themselves, to consult with them at all stages of the patient's stay in the hospital, both as to diagnosis and treatment, and that both pathologists and radiologists are expected when it is necessary, to review the patient's chart, his clinical history and, if need be, see the patients themselves in order to successfully carry out the consultative nature of their work. The pathological and radiological diagnoses are available for acceptance by the attending physician just as are the diagnoses of other consultants in other medical specialties. In many instances, they are so accepted and become the final diagnosis in the case.

18. The Court further finds that a number of corporations for profit, partnerships and individuals are operating hospitals, licensed under Chapter 135 B of the Code.

19. Under variable fact situations as shown by the evidence, notwithstanding the purported control of pathology laboratory and X-ray department services in physicians, the Court finds that through employment and compensation of technicians, provision of equipment and supplies and establishment of fee schedules, most hospitals operated by Plaintiffs are in increased control of these medical services in addition to that control gained through compensation arrangements with the physician and hospital billing of patients for the services, but finds there has been no actual interference by the hospital trustees or administrators with the professional services of the pathologists and radiologists.

20. The Court further finds this dispute does not involve the quality of laboratory and X-ray services, but involves several disputes which have developed through the last several years with the rapid increase of these important services and the method followed in providing them.

21. The Court further finds the method of operating laboratory and X-ray departments as described herein has been so followed for many years in the State of Iowa as well as most other states in the United States and that the several questions regarding said method were brought to a point of action by the Opinion of the Iowa Attorney General under date of February 19, 1954.

22. The Court further finds the great weight of the opinion testimony offered herein establishes that the pathologists and radiologists are engaged in the practice of medicine in their activities as shown by the evidence herein.

CONCLUSIONS OF LAW

One of the contentions of plaintiffs is that the pathologists, radiologists and the technicians working under their directions are not practicing medicine in doing what they do as disclosed by the evidence herein.

Section 148.1 of the Iowa Code reads as follows:

Persons engaged in practice. For the purpose of this title the following classes of persons shall be deemed to be engaged in the practice of medicine and surgery:
1. Persons who publicly profess to be physicians or surgeons or who publicly profess to assume the duties incident to the practice of medicine or surgery.
2. Persons who prescribe, or prescribe and furnish medicine for human ailments or treat the same by surgery.
3. Persons who act as representatives of any person in doing any of the things mentioned in this section.

The Supreme Court of Iowa has made several pronouncements as to what is the practice of medicine, and in the case of State v. Hughey, 208 Iowa 842, 226 N. W. 371, in considering a case of one who laid on hands after purporting to determine the physical ailment, stated at page 846 of the Iowa report, in considering Section 2538, which is now Section 148.1:

> The term "practice of medicine" is defined by Section 2538. It is not confined to the administering of drugs. Under this statute, one who publicly professes to be a physician and induces others to seek his aid as such is practicing medicine. Nor is it requisite that he shall profess in terms to be a physician. It is enough, under the statute, if he publicly profess to assume the duties incident to the practice of medicine. What are "duties incident to the practice of medicine"? Manifestly, the first duty of a physician to his patient is to diagnose his ailment. Manifestly, also, a duty follows to prescribe the proper treatment therefor. If, therefore, one publicly profess to be able to diagnose human ailments, and to prescribe proper treatment therefor, then he is engaged in the practice of medicine, within the definition of Section 2538.

In the case of State v. Howard, 216 Iowa 545, 249 N. W. 391, wherein the defendant was enjoined from practicing medicine after twenty-one years of the practice of "Naprapathy" at Cedar Rapids, Iowa, our Supreme Court at page 550 of the Iowa report said:

> Admittedly also he purported to diagnose the ailments of his patrons. As a witness, he purports to have studied "Diagnosis." Correct diagnosis is one of the first duties of the qualified physician. Purported diagnosis is also the first resort of the disqualified one, and the first requisite of a miraculous cure. The ailments, curable or incurable, which he professes to discover, and to cure, are such only as his own diagnosis declares. He is subject to no check other than his own judgment because his new system of naprapathy affords him a complete refuge from any critic who does not profess his system. Diagnosis as a guide to treatment is therefore clearly one of the duties of the physician. This duty the defendant has always assumed to perform. Such was the situation in State v. Hughey, supra. What we said on the subject in that case is controlling here.

In the case of Granger v. Adson, *et al.*, 250 N. W. 722, it appears the plaintiff Granger, a layman, was conducting a health audit in the city of Minneapolis. For a fee of $10.00 per year he contracted with his subscribers to furnish four urinalyses and a blood pressure test each year. The urine samples were sent by mail to the plaintiff who then turned them over to Dr. Graves, a pathologist with whom plaintiff had contact to furnish the results of the analyses to him. If an analysis showed serious abnormal conditions, plaintiff advised his subscribers to consult a competent physician, but if the abnormality was slight, he advised proper diet, habits and exercise. In

holding the plaintiff was unlawfully practicing medicine and practicing the science of healing the Minnesota Supreme Court at page 723 said:

It is the contention of respondents that Granger was engaged in the practice of medicine contrary to the provisions of section 5717, Mason's Minn. St. 1927, and that he was engaged in the practice of healing as defined by the basic science law. Mason Minn. St. 1927, § 5705-1. It is alleged in the complaint: "It is true that in some cases where an abnormal condition is not indicated but certain minor disturbances appear, plaintiff, after consultation with the pathologist, and repeating the advice given him by the pathologist, advises the subscriber as to certain improved habits of either diet, exercise or living. Under no circumstances does plaintiff ever advise the taking of any medicine or any treatment, but suggests to all subscribers whose reports are repeatedly abnormal that they should consult their own physician. . . . That a urine analysis and blood pressure test furnish a convenient, reliable and accurate indication of the state of a person's health."

In our opinion, advising the subscriber for a fee as to certain improved habits of diet, exercise, or living, although not accompanied by any medical prescription or treatment, is a violation of section 5717. State v. Edmunds, 127 Iowa 334, 101 N. W. 431; Heintze v. New Jersey State Board, 107 N. J. Law, 420, 153 A. 253. Diet, exercise, and mode of living are agencies for the relief of disease. Indeed, they are the only known relief or treatment of some diseases. It further appears that the urinalyses and blood pressure tests are important as indicating the condition of a patient's health, and, when an abnormal condition is indicated, the opinion of the pathologist is passed on by the plaintiff to his subscriber.

In his complaint the plaintiff sets out some twenty-two items whose presence, absence, or quantity must be considered in determining the result of the analysis. The analysis and the test form a basis for a diagnosis. Necessarily the question of whether the analysis results in indications showing normal or abnormal conditions is a matter of professional medical opinion. Deductions must be drawn from the result of the analyses, and these deductions are of value only when made by a medical man. It cannot be otherwise. The pathologist is, of course, a licensed physician, and in this case is said to be an expert in his line. Obviously, if he were in direct contact with the subscriber as a patient, he would be practicing medicine in doing exactly what the plaintiff hired him to do. The results of his work the plaintiff passes on to his subscribers. It is settled law in this state that: "The science of diagnosing human diseases and human ailments has come to be a distinct branch or department of the medical profession; the diagnostician limiting his efforts to a discovery of the disease or ailment from which a patient may be suffering, its character and location, leaving the treatment thereof to some other physician or surgeon. This is a matter of common knowledge. And it requires no discussion or argument to demonstrate that the physician who thus applies his learning and energies is performing a highly important duty of the profession, and is engaged in the practice thereof, though he prescribes no drug and administers no specific treatment." State v. Rolph, 140 Minn. 190, 167 N. W. 553, 554, L. R. A. 1918D, 1096.

If Dr. Grave was practicing medicine in what he did and in determining for the plaintiff whether the condition of the urine was normal or abnormal, then, in our opinion, the plaintiff was practicing medicine when he passed on to his subscribers the result of the analysis and the advice of the pathologist. It was as much practicing medicine for the plaintiff to engage Dr. Grave to do this for him as it would have been if he had attempted himself to perform these analyses, as he in fact did in the case of the blood pressure tests. To pass on to his subscribers advice as to whether or not the tests indicated a normal or abnormal condition, and whether or not the subscriber should consult his physician or be content with the advice which plaintiff might give in regard to diet, exercise, or mode of living, was practicing medicine. In Re Disbarment of Otterness, 181 Minn. 254, 232 N. W. 318, 73 A. L. R. 1319, we said that a corporation or layman could not indirectly practice law by hiring a licensed attorney to practice law for others for the benefit or profit of such hirer. We are just as firmly convinced that it is improper and contrary to statute and public policy for a corporation or layman to practice medicine in the same way. The obligation of Dr. Grave under his contract was to plaintiff not to the subscribers. Plaintiff might engage any one to perform these analyses. What the law intends is that the patient shall be the patient of the licensed physician not of a corporation or layman. The obligations and duties of the physician demand no less. There is no place for a middleman.

We see nothing in this to prevent life insurance companies from furnishing gratuitous examinations to their policyholders. They charge no fee, and make the examination in furtherance of reduction of hazard. Neither do we see any objection to the employment by physicians of technicians and other experts, the results of whose work the physicians interpret as a help to diagnosis.

The definitions of clinical diagnosis and physical diagnosis are stated at page 34 of 7A, Words and Phrases, and many definitions of diagnosis are stated at page 550 of 12 Words and Phrases.

In the case of Williams v. Elias (Neb.) 1 N. W. (2d) 121, the court says:

A clinical diagnosis is one made from a study of the symptoms only and a physical diagnosis is one made by means of physical measure, such as palpation and inspection.

See also People v. Zinks, 7 N. Y. S. (2d) 941, at page 947.

Another issue in this case is the question of who may legally practice medicine in Iowa.

Section 147.2 of the Iowa Code provides:

License required. No person shall engage in the practice of medicine and surgery, chiropody, osteopathy, osteopathy and surgery, chiropractic, nursing, dentistry, dental hygiene, optometry, pharmacy, cosmetology, barbering, funeral directing or embalming as defined in the following chapters of this title, unless he shall have obtained from the state department of health a license for that purpose.

Section 147.3 of the Iowa Code provides:

Qualifications. No person shall be licensed to practice a profession under this title until he shall have furnished satisfactory evidence to the department that he has attained the age of twenty-one years and is of good moral character, except that women may be licensed as dental hygienists, or men or women may be licensed as barbers, or as cosmetologists, upon attaining the age of eighteen years.

In the case of State of Iowa v. Baker, 212 Iowa 571, 235 N. W. 313, our Supreme Court at page 579 of 212 Iowa, said:

The right to lawfully practice medicine in this state is a personal one. To attain such right, certain statutory requirements must be complied with.

And at page 581 the court said:

Medical practice acts are enacted for the protection of the public against the unskilled treatment of the sick or diseased by persons having neither the preparation nor the skill to diagnose diseases or to administer powerful and poisonous drugs. The welfare of the public is of the utmost concern in the enforcement of laws designed to guard and protect the public health. The merits of the secret formulas used in the treatment of cancer and other diseases is not of controlling importance in the decision of this case. Our concern is with the statute, which should be strictly observed.

Another contention of Plaintiff hospitals is that as non-profit corporations they are entitled to continue the operation of pathology and X-ray laboratories.

Does a corporation fall within the meaning of the term "person" as used in our licensing statutes?

The general rule is stated in 19 C. J. S. page 400, and at page 838 of 13 Am. Jur. which is as follows:

While a corporation is in some sense a person and for many purposes is so considered, yet, as regards the learned professions which can only be practiced by persons who have received a license to do so after an examination as to their knowledge of the subject, it is recognized that a corporation cannot be licensed to practice such a profession. For example, there is no judicial dissent from the proposition that a corporation cannot lawfully engage in the practice of law.

A corporation cannot be licensed to carry on the practice of medicine. Nor, as a general rule, can it engage in the practice of medicine, surgery, or dentistry through licensed employees. It is generally held that in the absence of express statutory authority, a corporation may not engage in the practice of optometry either directly or indirectly through the employment of duly registered optometrists.

In People by Kerner v. United Medical Service, Inc., (Ill.) 200 N. E. 157, 103 A. L. R., 1229, the court at page 163 of 200 N. E. said:

The respondent corporation earnestly contends that the ownership of a clinic, with offices where the treatment of

disease is engaged in solely by licensed and registered physicians and surgeons who are employed by the corporation, which receives the fee charged the patients, does not constitute the practice of medicine by the corporation. The respondent argues that the fact that the contract of payment for the medical services to be rendered is made between the corporation and the patient does not change the professional relationship between the patient and the various licensed and registered practitioners who treat him in the corporation's office. To support its contention, the respondent places reliance upon State v. Brown, 37 Wash. 97, 79 P. 635, 636, 68 L. R. A. 889, 107 Am. St. Rep. 798, in which the statute attacked required an examination and license in order to "own, . . . run or manage" a dental office. The decision that this statute was void, and also the decisions in State Electro-Medical Institute v. Platner, 74 Neb. 23, 103 N. W. 1079, 121 Am. St. Rep. 706, and State Electro-Medical Institute v. State, 74 Neb. 40, 103 N. W. 1078, 12 Ann. Cas. 673, cited by the respondent, are contrary not only to the views of this court expressed in Winberry v. Hallihan, 361 Ill. 121, 197 N. E. 552, Dr. Allison, Dentist, v. Allison, 360 Ill. 638, 196 N. E. 799, 800, and People v. People's Stock Yards State Bank, 344 Ill. 462, 176 N. E. 901, but also to the weight of authority. People v. John H. Woodbury Dermatological Institute, 192 N. Y. 454, 85 N. E. 697; State v. Bailey Dental Co., 211 Iowa 781, 234 N. W. 260; People v. Painless Parker Dentist, 85 Colo. 304, 275 P. 928; Painless Parker v. Board of Dental Examiners, 216 Cal. 285, 14 P. (2d) 67. In the recent case of Dr. Allison, Dentist, v. Allison, supra, this court observed that the practice of a profession is subject to licensing and regulation and is not subject to commercialization or exploitation. "To practice a profession," the court said, "requires something more than the financial ability to hire competent persons to do the actual work. It can be done only by a duly qualified human being, and to qualify something more than mere knowledge or skill is essential.... No corporation can qualify."

In the Dr. Allison case cited above, the Illinois court said:

It (a corporation) can have neither honesty nor conscience, and its loyalty must, in the very nature of its being, be yielded to its managing officers, its directors, and its stockholders. Its employees must owe their first allegiance to their corporate employer, and cannot give the patient anything better than a secondary or divided loyalty.

The Iowa court is in accord with the general rule.

In State v. Kindy Optical Co., 216 Iowa 1157, 247 N. W. 332, at page 1162 of the Iowa report, the court stated:

The defendant company could not conduct a business without a license. It could not obtain a license, and we can conceive of no reason why it should be permitted to continue to conduct a business under the license of an optometrist. We hold therefore that the defendant company was and is engaged in the practice of optometry and that it is so engaged in violation of the statutes of this state.

In the case of State v. Bailey Dental Co., 211 Iowa 781, 234 N. W. 260, our court at page 784 of the Iowa report said:

I. Defendant's first contention is that it is not practicing dentistry. Immediately upon its incorporation, it did open an office in the city of Des Moines, and equipped the same for the purpose of practicing dentistry. Pursuant to the same purpose, it employed licensed dentists for its work. This course of procedure has been followed ever since. It has advertised the practice of dentistry under its corporate name, and not otherwise. It has obeyed the statute in posting the names of its employee-dentists. No officer of the corporation is a licensed dentist. The ownership and control of the entire equipment is in the corporation and its officers, and not in the employees. Its unlicensed officials necessarily determine all its policies, whether they be deemed professional or commercial. If such officials were to carry on this business as individuals, without the formality of a corporate organization and without a license, would they be amenable to the statutes above quoted, as violators thereof? The affirmative on this question seems too plain to tolerate argument. If these officials could not, as individuals, conduct this business without a license, we can conceive of no reason why they should be permitted to do so, under the statute, under a corporate organization and name. If a business thus conducted by an individual be unlawful, it is likewise unlawful if conducted by a corporation. Code Section 8339. We hold, therefore, that the defendant-corporation was practicing dentistry, and was doing so, therefore, in violation of the statute.

* * * * * * *

Under then existing law, no person had a right to practice dentistry without an examination and license. From the very nature of this statutory requirement, a corporation could not bring itself within the terms of the statute. It could not pass an examination, and could not, therefore, obtain a license. To say nothing now of the relationship of dentistry to the public health and to the scope of police power in reference thereto, there are still other reasons of public policy why mere corporations might be barred from entering this field. There are certain fields of occupation which are universally recognized as "learned professions." Proficiency in these occupations requires long years of special study and of special research and training and of learning in the broad field of general education. Without such preparation, proficiency in these professions is impossible. The law recognizes them as a part of the public weal, and protects them against debasement, and encourages the maintenance therein of high standards of education, of ethics, and of ideals. It is for this purpose that rigid examinations are required and conducted as preliminary to the granting of a license. The statutes could be completely avoided and rendered nugatory if one or more persons who failed to have the requisite learning to pass the examination might, nevertheless, incorporate themselves formally into a corporation, in whose name they could practice lawfully the profession which was forbidden to them as individuals. A corporation, as such, has neither education nor skill nor ethics. These are sine qua non to a learned profession.

While recognizing the general rule, plaintiffs' counsel contend the plaintiff hospitals occupy a unique position as non-profit charitable hospitals and are not within the general rule.

Plaintiffs' counsel argue with great force the case of Goldwater v. Citizens Casualty Co., of New York, 7 N. Y. S (2d) 242, wherein the New York court, beginning at page 247 said:

The general rule that a corporation may not practice medicine has its exception in charitable hospital corporations which are organized for that express purpose and are sanctioned by law to treat the sick and injured. People v. John H. Woodbury Dermatological Institute, 192 N. Y. 454, 85 N. E. 697. In the Woodbury Case, the Court of Appeals held that (page 698) "hospitals, dispensaries, and similar corporate institutions which are unquestionably authorized by law to practice medicine, although, of course, only through the agency of natural persons who are duly registered as physicians" do not violate the law by practicing healing or advertising to practice medicine. The Woodbury ruling was followed in the case of Messer Co. v. Rothstein, 129 App. Div. 215, 113 N. Y. S. 772, affirmed 198 N. Y. 532, 92 N. E. 1107.

A study of this case, which involved the hospital's attempt to collect for a surgical fee, shows the hospital to be a public institution used primarily for the care and treatment of indigents, and that the hospital was unquestionably authorized by law to treat patients and to practice medicine.

If the Goldwater case is the law of this case now before the court, then the plaintiff hospitals must prevail and would have the right to hire medical specialists in all fields of medicine, including having surgeons on salary.

Plaintiffs contend the provisions of Chapter 135B, passed in 1948 by the Iowa Legislature, grants to them the right to operate pathology and X-ray laboratories, and that they are excluded from the provisions of Chapters 147 and 148 of the Iowa Code.

Section 135B.1 provides as follows:

Definitions. As used in this chapter:
1. "Hospital" means a place which is devoted primarily to the maintenance and operation of facilities for the diagnosis, treatment or care over a period exceeding twenty-four hours of two or more nonrelated individuals suffering from illness, injury, or deformity, or a place which is devoted primarily to the rendering over a period exceeding twenty-four hours of obstetrical or other medical or nursing care for two or more nonrelated individuals, or any institution, place, building or agency in which any accommodation is primarily maintained, furnished or offered for the care over a period exceeding twenty-four hours of two or more nonrelated aged or infirm persons requiring or receiving chronic or convalescent care; and shall include sanatoriums, rest homes, nursing homes, boarding homes, or other related institutions within the meaning of this chapter. Provided, however, nothing in this chapter shall apply to hotels or other

similar places that furnish only food and lodging, or either, to their guests. "Hospital" shall include, in any event, any facilities wholly or partially constructed or to be constructed with federal financial assistance, pursuant to Public Law 725, 79th Congress, approved August 13, 1946.
2. "Person" means any individual, firm, partnership, corporation, company, association, or joint stock association; and includes any trustee, receiver, assignee or other similar representative thereof.
3. "Governmental unit" means the state, or any county, municipality, or other political subdivision or any department, division, board or other agency of any of the foregoing.

A reading of this section and the other provisions of Chapter 135B leads this court to the conclusion that it is an unambiguous act for the licensure and regulation of hospitals and that it does not exclude hospitals from the provisions of Chapters 147 and 148.

Repeals by implication are not favored by the courts and will not be upheld unless the intent to repeal clearly and unmistakably appears from the language used and such a holding is absolutely necessary. The general rule is that if by any fair and reasonable construction prior and later statutes can be reconciled, both shall stand. See Yarn v. City of Des Moines, 243 Iowa 991, 54 N. W. (2d) 493; State ex rel McElhenney v. All Iowa Agricultural Ass'n, 242 Iowa 860, 48 N. W. (2d) 281, and citations.

If plaintiffs' contention is right then all institutions included in the definition of "hospital" set out in Section 135B.1 would have a right to operate pathology and X-ray laboratories and perhaps practice other specialties in the field of medicine.

Plaintiffs are not making such a contention as they claim a non-profit charitable hospital is in a unique position and must be excluded from the general rules and statutes.

No authorities squarely in point as to such hospitals have come to the attention of the Court without some specific legislative authority as quoted in the Goldwater case.

The question of whether the non-profit feature of a corporation has any significance has been passed on regarding the practice of law.

In the case of People ex rel. Chicago Bar Association v. Motorist Association of Illinois, 188 N. E. 827, the Illinois court stated:

> It is well settled that no corporation can be licensed to practice law. The fact that the respondent was a corporation organized not for profit does not vary the rule.

In the case of Hospital Credit Exchange v. Shapiro, 59 N. Y. S. (2d) 812, the court at page 816 said:

> Not so easily is the law circumvented which prevents collection agencies from carrying on a legal practice. Any collection agency could thus become a charitable corporation if it organized itself under the Membership Corporation Law instead of under the Stock Corporation Law, if it undertook to serve only charitable organizations, and if, after remunerating its staff however handsomely it distributed its so called profits among its clients. This might be very good business for officials of a closely managed collection agency, who could thus grant themselves very satisfactory compensation for conducting what is tantamount to a law practice. It is not necessary that such compensation take the form of dividends or a distribution of profits; it may be paid in salaries or commissions. That all the earnings are not distributed to the staff but that a portion is returned as "profits" to the charitable organizations which are the agency's exclusive customers, does not palliate the violations of law which have been committed and does not make the practice of the agency any the less contrary to the public policy implicit in the statutory inhibitions.

By this citation the Court casts no reflections at plaintiff hospitals, but good motives do not provide immunity from the application of the statutes or the principles of law. The law applies to all and must not be violated even if the intention is only to do good. (American Medical Association v. United States, 130 Fed. (2d) 233.)

Most of the reasons given in the decisions condemning corporate practice generally are applicable to the non-profit corporations.

Another contention of plaintiffs is that pathology and X-ray laboratories have been operated by hospitals for many years and that public policy demands such operation continue.

The case of Iowa Farm Serum Co. v. Board of Pharmacy Examiners of the State of Iowa, 240 Iowa 734, 35 N. W. (2d) 848, involves many legal propositions found in this case. In said case the Supreme Court held that what had been done relative to the sale of hog serum for thirty-eight years was in violation of the statutes cited therein, and declared certain conduct over thirty-eight years to be illegal.

At page 742 of the Serum case the court said:

> The department heads, by their mere failure to enforce, will not engraft a fifth exclusion in the pharmacy practice act, as to dealers in virus and serum.

It is the conclusion of this court that the failure of those charged with the enforcement of the law cannot write an exclusion to the provisions of Chapters 147 and 148 by their failure to act. Otherwise the judgment of the legislature would be subject to the wishes of those charged with law enforcement.

At page 743 of the Serum case our court said:

> We know of no authority for holding that a legislative intent or policy emerges by reason of legislative inactivity in the face of continued unenforcement of a plain unambiguous law.

At page 743 our court also said:

> The public policy is announced by the legislature, not the courts.

It is the conclusion of the Court that plaintiffs are not entitled to operate pathology and X-ray laboratories merely because they have done so for many years, nor has the Court the right to indulge in judicial legislation. The law is established and if there is a change it is for the legislature and not this Court. If the non-profit corporations operating hospitals are to practice medicine it is for the legislature to say by proper definite legislation.

Subsection 4 of Section 147.56 of the Iowa Code provides as follows:

> 147.56 Unprofessional conduct. For the purposes of section 147.55 "unprofessional conduct" shall consist of any of the following acts:
> 1. . . . . .
> 2. . . . . .
> 3. . . . . .
> 4. Division of fees or agreeing to split or divide the fees received for professional services with any person for bringing or referring a patient or assisting in the care or treatment of a patient without the consent of said patient or his legal representative.
> 5. . . . . .
> 6. . . . . .
> 7. . . . . .
> 8. . . . . .

It is the conclusion of the Court that the pathologist or radiologist by permitting a hospital to bill for medical services in the name of the hospital without the consent of the patient or his legal representative, violates the provisions of Subsection 4 of Section 147.56.

Such billing might properly be held to bring the hospital within the provisions of Section 147.93 of the Iowa Code which provides as follows:

> Prima facie evidence. The opening of an office or place of business for the practice of any profession for which a license is required by this title, the announcing to the public in any way the intention to practice any such profession, the use of any professional degree or designation, or of any sign, card, circular, device, or advertisement, as a practitioner of any such profession, or as a person skilled in the same, shall be prima facie evidence of engaging in the practice of such profession.

It is the conclusion of the Court that under the facts established in this case and the law as the Court understands it, that the work done by the pathologist, radiologist, and the technicians working in the pathology and X-ray laboratories, constitutes the practice of medicine.

That under the Iowa law the privilege of practicing medicine is a personal one requiring qualifications which cannot be met by a corporation.

That the provisions of Chapter 135B do not grant hospitals any right to practice medicine by the operation of pathology and X-ray laboratories in the manner shown by the evidence.

That plaintiff hospitals are not excluded from the requirements of the Iowa practice acts in regard to the practice of medicine on the basis that they are non-profit corporations or because of long standing custom and inactivity on the part of those charged with enforcing the law, or because of public policy in the absence of legislative enactment.

That plaintiff hospitals under the Court's findings of fact and conclusions of law have been engaged in the unauthorized, unlicensed and illegal practice of medicine.

That under the Court's findings of fact and conclusions of law the pathologists and radiologists have been violating the provisions of Subsection 4 of Section 147.56.

The Court does not intend that any findings or conclusions herein affect in any way that obligation of public hospitals under Chapter 347 or 380 of the Code, as well as the State Hospital at Iowa City, to provide medical treatment for indigent persons or tuberculous patients as provided in Chapter 254 and Chapter 255 of the Code wherein medical treatment is to be provided by hospitals of that category to patients of certain entitlement, nor as to the operation by the State of mental or other hospitals authorized by law.

What has been heretofore concluded has no application to Evangelical Hospital, Marshalltown, Iowa, as to radiology, the evidence showing that such operation is being conducted legally within the intendment of these conclusions.

The Court is not to be understood as holding the plaintiff hospitals cannot own and maintain the facilities of pathology and X-ray laboratories and receive just compensation for the use thereof, as certainly these are essential and necessary parts of a modern hospital, nor that the operation of said laboratories within the law need affect the care and treatment to be given the patients.

It is the opinion of the Court that the furnishing of proper pathology and X-ray services to the patients in the hospitals can be worked out on the local level and within the law.

The attorneys for the defendants and intervenor are directed to prepare a decree herein as per the Court's findings and conclusions, including the taxation of costs against the plaintiffs.

Dated this 28th day of November 1955.

(signed) C. EDWIN MOORE

Judge District Court, Ninth Judicial District of Iowa, Des Moines, Iowa

PRESIDENTS' AND SECRETARIES' CONFERENCE

A conference of county medical society presidents and secretaries was held in Des Moines at the Savory Hotel on Sunday, October 23. The conference also included county legislative contact and public relations representatives.

The program included a report on national legislation by Dr. David B. Allman of Atlantic City, a Trustee of the AMA and chairman of the AMA committee on legislation. Mr. C. Joseph Stetler, Director of the AMA law department reviewed the legislative organization of the AMA, and Mr. James E. Bryan of Summit, New Jersey, public relations counselor and author of the book PUBLIC RELATIONS IN MEDICAL PRACTICE discussed medical public relations.

Members of the Iowa State Medical Society who appeared on the program were President L. A. Coffin, who was chairman of the conference, Dr. Fred Sternagel, Chairman of the Board of Trustees, who gave the Board of Trustees report, Dr. F. C. Coleman, of Des Moines, who gave a report of the ISMS legislative committee, Dr. H. E. Wichern, of Des Moines, who discussed present OASI practices, and Dr. Otto N. Glesne, of Fort Dodge, who gave a report on ISMS public relations activities.

Mr. Robert B. Throckmorton, ISMS legislative Counsel discussed obtaining support for legislative programs, and Mr. Philip Cless, Des Moines attorney, gave a report on the hospital-physician lawsuit in which he is legal counsel for the physicians. Mr. Ray Stewart, ISMS and Blue Shield Public Relations Director, discussed plans for expanded public relations activities, and Mr. Donald L. Taylor, ISMS Executive Secretary, reported on the activities of his office and introduced members of the office staff.

Highlight of the conference was a report by Dr. David B. Allman on the status of proposed social security legislation in HR 7225. Dr. Allman made an appeal for all doctors to become acquainted with the implications of HR 7225, and stated that from such an examination it would be clear "that it is imperative for physicians the country over to understand fully the dangerous threat to medicine which this proposed amendment to the Social Security Act carries.

"This threat is all the more dangerous because it is more subtle than those which we have had to combat previously—so subtle, in fact, that most Americans will hardly believe it exists. It is an

outstanding example of the type of legislation that the social planners use to put private enterprise on a difficult spot of defending itself.

"We must—and I am sure we shall—find the ways to tell this story in so forceful and clear a manner that there can be no possibility for misunderstanding or lack of knowledge by any physician—or by any citizen—in this country."

The theme and objectives of the conference were stated in this excerpt from Mr. James E. Bryan's speech: "Any occupation, any institution that falls into disfavor with the public is doomed. Any calling that fails to identify its actions and purposes unmistakably with the public welfare will be rejected as surely as the night follows the day. Public relations is not a thing apart, not a special activity, not a department of medical society work, but a social philosophy, a set of attitudes, a point of view toward other people."

SOCIAL WORKERS DESERVE COOPERATION

In 1954, out of a total of 1,758 referrals made to Family Service of Saint Paul, Minnesota, a Community Chest agency, only thirty-three (1.8 per cent) were instigated by physicians.* How might this significantly low number be explained? Why this serious and perhaps appalling lack of communication between two supposedly closely allied professional groups?

There are undoubtedly a variety of reasons. I should like to comment on the two that I consider most important and most worthy of consideration.

The first revolves around the simple but pregnant fact that doctors by the very nature of their orientation tend to refer their patients to other doctors. There is a definite but natural hesitancy on the part of many physicians to share the confidences of their patients with others outside the medical sphere. In order to maintain and uphold medical standards, we have adopted a strict and rigid code of medical ethics which acts as a strong deterrent and prevents us from more active participation with our fellow workers in the field of human welfare. In our partial isolation, we may be unaware that social agencies no longer play the part solely of "relief workers," doling out food, shelter, clothing and money to the indigent. The social service worker of today is a person trained in the art of dealing with his fellow man on both a psychological and sociological level, a person striving for complete professional status and entitled to it. In this connection, interested and responsible individuals around the country are now beginning to deal with this issue by presenting bills to their state legislatures, requesting formal licensure of professional workers.

This brings me to the second reason for the apparent chasm existing between the physician and the Family Service agency. The doctor may be unacquainted with what a social agency has to offer. The question is often asked of me, "How can the medical profession best utilize a Family Service agency?" Suffice it to say that in addition to financial consulting and legal advice, a whole host of problems centering around marital difficulties, family relationships and child behavior come under its jurisdiction. Intertwined social and psychological perplexities that can be handled on a case-work level ought to provide occasions for worthwhile referrals from the physician to the social agency.

—Philip M. Margolis, M.D., in an Editorial in MINNESOTA MEDICINE, 38:708, (Oct.) 1955.

* There are Family Service agencies in Iowa at Waterloo, Sioux City, Des Moines and Davenport. For the addresses and a description of the services offered, *see* A HANDBOOK OF RESOURCES AVAILABLE TO PHYSICIANS, p. 10.

UNIFORM CLAIM BLANKS NEARLY READY

A two-year cooperative effort by the insurance business and the medical profession to streamline health insurance claim forms used by doctors is nearing a successful conclusion, according to a recent progress report from the Health Insurance Council.

The Council reports that its Special Committee on Uniform Claim Forms has submitted for acceptance by insurance companies the final drafts of two all-purpose and two abbreviated physican statement forms. One all-purpose and one abbreviated form are for use with group insurance policies, and the other two are for use with individual and family policies. Substantial company support for these four forms is indicated by the responses received to date.

The other short forms already have received approval from the AMA Council on Medical Service and have been accepted by companies writing the majority of the commercial health insurance business in America. One of these approved and accepted forms covers physicians' statements in connection with group surgical benefits, and the other form covers individual or family hospital, medical or surgical benefits.

All six physicians' statement forms were processed through several stages of development and consultation with the medical profession before being put into final draft. Many compromises were made, particular emphasis being placed on accommodating the forms to the convenience of doctors.

In order to achieve uniformity in questions calling for answers by the physician, and to compensate for differences in company requirements due to variations in coverages, both basic and optional questions have been included in the forms.

Insofar as the physician is concerned, the only difference between the forms of different companies will be whether or not the optional questions are used.

At about the end of this year, the Council plans to have a pamphlet ready for distribution to doctors. It will tell the story of the uniform claim forms project and will also serve as a working guide on the use of the new blanks.

LETTER TO THE EDITOR

Sir:

In reply to a letter by Dr. J. Lawrence Cochran in the September, 1955, issue of the JOURNAL, hypnoanesthesia in obstetrics has been used sporadically at the State University of Iowa for years, at least one patient being delivered thus in 1946.

Dr. Georg Klutke, a resident in the Department of Obstetrics and Gynecology, and Dr. William Macy, of the Department of Psychiatry, delivered approximately 10 patients in this manner between June 18, 1953, and the fall of that same year. Some patients were delivered with hypoanesthesia alone and some with infiltration anesthesia. It is considered a standard technic, but is used infrequently, for a large investment of time on the part of the hypnotist and careful selection of the subject are required. None of these cases involved twins.

Regarding the establishment of priorities for certain procedures, it would seem that searching for priority should be confined to important new technics, rather than the collection of minor geographical variants of standard procedures. This sort of collection of facts should best be left in the hands of its present practitioners, the baseball aficionado and the DAILY RACING FORM. In the latter instance at least, such collections serve a practical purpose.

Yours truly,

W. B. GODDARD, M.D.

PROPHYLAXIS FOR RHEUMATIC FEVER

The State Services for Crippled Children, at Iowa City, has undertaken to provide free oral penicillin to prevent recurrences of rheumatic fever in medically indigent youngsters. Patients are eligible regardless of whether they have been previously seen at SUI or at field clinics of the SSCC. The requirements are (1) that the patient must be 21 years old or younger, (2) that he must be medically indigent, and (3) that he must (a) have had a bout of rheumatic fever within the past year, (b) have demonstrable cardiac residuals from an even earlier attack, or (c) be suffering an acute attack when the request is made.

The penicillin is to be oral Bicillin, 200,000-unit tablets, to be taken daily irrespective of meals. When the physician has made application on the SSCC's form, a two-months supply will be sent to the patient, and the doctor will be notified.

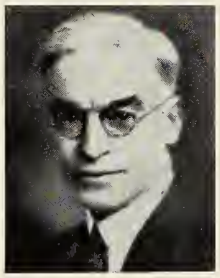
When a patient is enrolled in the program, it is agreed that he will at some time be examined by persons representing the SSCC, for the purpose of collecting data on the patients included. The examiner will neither report or comment upon his findings to the patient or the patient's parents, but will report them to the patient's physician. For that examination, the patient will be asked to attend one of the clinics that the SSCC conducts, and the physician's cooperation will be valuable in getting the patient to present himself at the place and time designated.

It is understood that doctors may remove their patients from the program at any time.

JOHN THOMAS McCLINTOCK, M.D.
1873-1955
An Appreciation

A host of SUI College of Medicine alumni, colleagues and friends were saddened by the death of Dr. John T. McClintock, emeritus professor of physiology, on Sunday, September 25, 1955, in Iowa City, from chronic heart disease.

Dr. McClintock was a native Iowan, born in Burlington June 7, 1873, the son of the Rev. John Calvin and Mary W. McKean McClintock. He received his bachelor of arts degree from Parsons College, Fairfield, in 1894, and graduated from the medical department of the State University in 1898.



The early recognition that he was a superior student led to his appointment as assistant and demonstrator in pathology and bacteriology, a post that he held during his junior and senior years. He also was principal assistant in the special Pasteur courses in practical bacteriology conducted after the close of the medical term in 1897, 1898 and 1899.

Soon after his graduation in medicine, Dr. McClintock was appointed demonstrator in anatomy, and he served in that capacity until 1901. Then the chair of physiology was vacant, and he was appointed professor of that subject, with the arrangement that he might have a year of graduate study in European medical centers before he assumed his teaching duties.

In March, 1901, the medical building at the University and its contents were completely destroyed by fire, and it happened that I was delegated to visit Europe for the purpose of collecting material for the museum and for teaching purposes in pathology and bacteriology, as well as to gather information regarding the construction of new medical laboratories. With our wives, Dr. McClintock and I traveled together. It was an interesting experience. My responsibilities required our stopping over in New York City. There I bought fifty microscopes, complete with oil immersion lenses, from the Bausch and Lomb Optical Company. Then the four of us had a comfortable voyage via North German Lloyd steamer to Bremen, and interesting visits to the university centers of Leipzig, Berlin, Prague and Vienna.

Dr. McClintock decided to devote most of his years to study with the eminent physiologists Ludwig and His at the University of Leipzig. He returned in time for the opening of the 1902-3 ses-

sion at SUI, and thus began a period of teaching in physiology that continued for more than 40 years, probably the longest record of service in the history of the College of Medicine.

During his first year, the physiology laboratories were moved to the new laboratory building, where they remained until the removal of the medical school and University Hospitals to the west side of town.

Many of the physicians of Iowa had their training in physiology under Dr. McClintock's inspiring guidance. Others served on his teaching staff and gained prominence as teachers and practicing clinicians in medical centers throughout the United States.

Dr. McClintock became interested in the wider field of medical education, became an active member of the Association of American Medical Colleges, and served on several of its important committees.

He was associate dean of the College of Medicine, and for a quarter of a century was director of postgraduate conferences, contributing greatly to the prestige of the University Hospitals and the College of Medicine as a center for continuation study.

He early became interested in medical history, particularly as related to the development of the SUI College of Medicine since its founding in 1870. The result of his careful research established him as the medical historian of the University. For many years he served on the Historical Committee of the Iowa State Medical Society, and prepared the interesting chapter on "Medical Education in Iowa" for ONE HUNDRED YEARS OF IOWA MEDICINE, published in 1951. In addition, he was the author of numerous scientific articles in leading medical journals.

His professional society affiliations included the Johnson County Medical Society (past president); the Iowa State Medical Society; the American Medical Association; the American Association for the Advancement of Science; the Sigma Xi Honorary Science and Alpha Omega Honor Medical Societies. He was granted the degree of Doctor of Science by Parsons College in 1925.

Dr. McClintock was blessed with a noble and understanding life's companion, Beulah George McClintock, and two worthy sons, Dr. John C. McClintock, of the Department of Surgery at Albany Medical College, and James Philip McClintock, of Worthington, Ohio.

Dr. McClintock's last appearance at a University exercise was at the Medical Convocation June 9, 1955, where he and a number of other men were introduced as professors emeriti. Thus closed a life of sacrifice and devotion to the ideals of medicine. In the words of President Hancher, his contribution "added greatly to the stature and quality of university medical education," and it will ever be his most enduring monument.

—Walter L. Bierring, M.D.

NEW VIRUS INFECTION OF EYE

Addressing the Linn County Medical Society, at Cedar Rapids on November 10, Dr. A. E. Braley, head of the Department of Ophthalmology at SUI, warned of the prevalence of a new inflammatory ailment of the eye, known as Greeley's disease. About 20 cases of it among students at the University had recently been brought to his attention.

Associated with this acute inflammation of the eye are a sore throat and a temperature that he said in some cases is as great as 104° F. The infection usually lasts about two or three weeks.

Unlike the ordinary pink-eye, Greeley's disease is a virus infection, Dr. Braley said, but is equally contagious. The cases that he observed appeared to have no common cause, and the infection seems sporadic.

Passing to the discussion of other causes for "red eye," he said that acute glaucoma is the most important, though its incidence, fortunately, has not been very great hereabouts. Red eye may be associated with forms of arthritis, foreign protein therapy, tuberculosis, or a great variety of other diseases.

A branching type of ulcer, "cold sore," is more severe than it used to be, Dr. Braley declared. It requires very careful treatment. Sometimes prolonged use of cortisone or hydro-cortisone makes it much worse. Inflammation of eyes associated with allergies may be traced to cream-base shampoos and cosmetics. Eighty per cent of such cases are found among women, though children, too, often have red eyes that can be accounted for by the discovery of allergies.

TAX PAMPHLET APPEALS FOR AMEF GIFTS

An attractive tax folder, containing an appeal for contributions to the American Medical Education Foundation signed by Dr. Elmer Hess, president of the AMA, has been mailed to doctors. It stresses the importance of tax savings that can be accomplished by such gifts.

During the first nine months of the current campaign, contributions amounted to no more than $540,343.33, including the 1955 AMA grant of $100,000, compared with $996,198.75 received during the same period last year.

Although the Foundation's contributors increased in number from 15,111 in the first nine months of 1954 to 16,339 in the comparable period of 1955, income is $455,855.52 less than it was a year ago. As a result, the Foundation has picked up less than $45,000 in individual contributions this year. In order to maintain last year's record, the Foundation must raise $45,500 during each of the remaining ten weeks of the campaign.

President's Page

As we approach the holiday season and the end of another year of activity, I would like to thank each and every member of the Iowa State Medical Society for his fine cooperation in attending to the affairs of the Society.

I would like to thank the members of the committees who have been so generous with their time in the performance of their duties. Also, I would like to thank the members of the office personnel for their fine cooperation and their unselfishness with their time in carrying out the work of the Society.

To you all a Merry Christmas and a Happy New Year.

L. R. Offerman, M.D.
President

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

THE YEAR BOOK OF GENERAL SURGERY (1955-1956 Year Book Series), ed. by *Evarts A. Graham,* M.D., with a Section on Anesthesia ed. by *Stuart C. Cullen,* M.D. (Chicago, The Year Book Publishers, Inc., 1955. $6.00).

CLINICAL ANALGETICS, by *E. G. Gross,* Ph.D., M.D., and *M. J. Schiffrin,* Ph.D. (Springfield, Illinois, Charles C Thomas, 1955. $3.00).

PREVENTIVE MEDICINE IN WORLD WAR II (Volume II of ENVIRONMENTAL HYGIENE, ed. by Col. *John Boyd Coates, Jr.,* M.C.), ed. by Ebbe Curtis Hoff, Ph.D., M.D. (Washington, D.C., U. S. Govt. Printing Office, 1955. $3.50).

FLUID THERAPY, by *James D. Hardy,* M.D. (Philadelphia, Lea & Febiger, 1955. $5.50).

THE RELIEF OF SYMPTOMS, by *Walter Modell,* M.D. (Philadelphia, W. B. Saunders Company, 1955. $8.00).

BOOK REVIEWS

CLINICAL ELECTROMYOGRAPHY, by *Alberto A. Marinacci,* M.D. (Los Angeles, San Lucas Press, 1955. $6.00).

Dr. Marinacci, a clinical neurologist, has spent all of his time for the past seven years in electromyography and electroencephalography. He has studied more than 8,000 patients by electromyography during that time. The fact that they had been referred by neurosurgeons, neurologists, orthopedic surgeons, general surgeons, internists and general practitioners demonstrates that it is not just the specialist in nervous diseases who sees problems in which the E.M.G. can be of diagnostic help. As he points out in the subtitle of his book, it is useful in the diagnosis of lower motor neuron diseases, peripheral neuropathy and the myopathies.

Luigi Galvani, in 1791, found that an electric current is produced during muscular contraction. In 1856, Schiff observed fibrillation in muscles deprived of their innervation. In 1928 and 1929, neuromuscular action potentials were recorded, and the spontaneous action current in fibrillation of denervation was described. It is upon this fibrillation of denervation that clinical electromyography depends. These clinical electromyographic recordings have been utilized for patient diagnosis since World War II.

The contents of Dr. Marinacci's book include a section on historical and physiologic aspects, with six chapter headings; a section on clinical considerations, with eight chapters; and an appendix containing technical details of an electromyographic examination and a short atlas of E.M.G. classification plates. There is an extensive bibliography and an index. The book is printed for easy reading, on non-reflecting paper, and it is well written and to the point.

The monograph is undeniably authoritative, and it records a pioneering experience in a new field of diagnosis. For those interested in making use of or understanding it, the book is definitely recommended. —*John T. Bakody,* M.D.

COMMUNICABLE DISEASES, by *Franklin H. Top,* M.D., Third Edition. (St. Louis, The C. V. Mosby Company, 1955. $18.50).

The third edition of this book has a very peculiar reason for its existence: cases of infectious diseases are so infrequent that medical students are not presented with enough cases to familiarize them with all varieties. Reading may be the only means by which they can acquire the knowledge of them that they ought to have.

In revising his popular text, Dr. Top has called upon additional collaborators, has added illustrations and has installed new sections on sulfonamides and antibiotics, anthrax, histoplasmosis and cat scratch fever. Several chapters have been rewritten. Section I of the volume deals with generalities of infection, immunity, control, antibiotics and the like. Section II deals with particular disease entities.

The makeup of the book is well conceived. Pages are small; space between lines is large; illustrations, including color plates, are liberally sprinked through the text; each section and subdivision is succinct, yet thoroughness is not sacrificed; and the collaborators are of high caliber.

The only criticism which the reviewer could offer is that the price of the book is exceptionally high. Even though such purchases are deductible, its costliness may prevent some men from using it. And that is regrettable, for among practicing physicians there is a great tendency at present toward laxity of thought and action in dealing with infectious diseases.—*D. A. Glomset,* M.D.

BEDSIDE DIAGNOSIS, by *Charles Seward,* M.D., F.R.C.P., Third Edition. (Edinburgh and London, E. & S. Livingstone, Ltd.; Baltimore, The Williams and Wilkins Company, 1955. $4.00)

This book presents a different facet in the approach to diagnosis. It bridges the gap between the doctor's first glimpse of his patient and the point at which he arrives at a tentative working diagnosis. Whereas the usual textbook author takes for granted that a tentative diagnosis has been made, Dr. Seward gives an approach to the tentative diagnosis.

Since the principal symptoms of disease are relatively few in number, he considers 20 of the commonest of them, and then explains the various diagnostic problems that are presented to the examining physician. Use of the book is predicated on the doctor's having taken a careful history and elicited the principal symptom.

It is a well organized book, easy to read and well outlined and indexed. I believe it would be a valuable reference for the medical student and for the young doctor.—*William H. Sproul,* M.D.

ANTIBIOTICS AND ANTIBIOTIC THERAPY: A CLINICAL MANUAL, by *Allen E. Hussar,* M.D., and *Howard L. Holley,* M.D. (New York, The Macmillan Company, 1954. $6.00).

The antibiotics have done more to advance medical practice than any other single factor. All specialties are involved, and the number of diseases treated primarily or secondarily with antibiotics is almost unlimited.

But because of the enormous number of reports on antibiotic therapy in recent literature and because of the conflicts of opinion that they have expressed, the average practitioner prescribes antibiotics injudiciously. This volume, then, is particularly opportune, for it is the first good clinical manual on the properties, potentialities and limitations of the antibiotics in clinical practice.

There are three main divisions in the book. Part I deals with fundamentals of antibiotic therapy. Part II describes the general characteristics, antimicrobial activity, side effects and general rules for usage of each of the major antibiotics. Part III describes various specific infections and infectious diseases and the various means of treating them. Antibiotic synergism and antagonism are clearly described. Previous reports had given conflicting opinions on this subject. At the end of Part I there are 12 "commandments" of antibiotic therapy which every physician should read. The argument against the liberal use of antibiotics for common colds and other vague fevers is forcefully presented.

This book should be in every physician's library.—*Charles H. Gutenkauf,* M.D.

PERINATAL MORTALITY IN NEW YORK CITY; RESPONSIBLE FACTORS, by *Schuyler G. Kohl,* M.D. (Cambridge, Massachusetts, Harvard University Press, 1955. $2.50).

This small book, a study of perinatal deaths in New York City, will be of interest to those few doctors who are concerned about the curtailment of needless infant deaths.

The study discussed in this book included details of 955 perinatal deaths, 237 of which were stillbirths, and the remainder live births. Of the neonatal deaths, 483 occurred within the first five days of life, and the remaining 235 occurred from the sixth to the thirtieth day. All records of deaths—birth and death certificates and hospital records—were collected and submitted, together with corrected protocols, to a reviewing board which determined preventability, responsibility and cause of death.

The study revealed that more than one third of the perinatal deaths were preventable and that the frequency of preventability for the death of mature infants was 1.45 times as great as that of the death of premature inafnts. The responsibility factors, in order of frequency, were unavoidable disaster, errors in medical judgment, unsatisfactory pediatric care, errors in medical technic and faulty prenatal care. Preventable deaths occurred less frequently in teaching hospitals. Death certificates did not agree with clinical records in most of the cases. Many other maternal and obstetrical factors were related to preventability of death.

Although the bulk of the book is concerned with statistical methods of sampling and weighing, the conclusions drawn stimulate interest in developing similar studies. As a result of the conclusions, the authors themselves offer sound advice on methodology which will be of great assistance to those interested in extending a study of this type to other geographical areas.—*Madelene M. Donnelly,* M.D.

GIFTS FOR SUI COLLEGE OF MEDICINE

Gifts and grants totaling $22,187.50 have recently been accepted by the finance committee of the State Board of Regents for use in the SUI College of Medicine. The largest was an allocation of $8,391 from the National Institutes of Health to assist Dr. Michael Bonfiglio, assistant professor of orthopedic surgery, and Mr. W. S. Jeter, assistant professor of bacteriology, in their study of the immunology of bone transplants.

A grant of $5,700 was accepted from the American Cancer Society for research on metabolism of cells grown in tissue culture by Dr. P. J. Leinfelder, professor of ophthalmology, and Miss Betty Danes, research assistant professor of ophthalmology and physiology. The National Council to Combat Blindness, Inc. has given $985.50 for a study by Dr. Leinfelder and Dr. Bernard Schwartz, resident in ophthalmology, on effective change in pH in the aqueous in the metabolism of the lens.

A $4,000 grant from the American Chicle Company was accepted for clinical work and travel by Dr. W. D. Paul, professor of internal medicine, in connection with a study of antacids, and $200 was received from Plough, Inc. for use by Dr. Paul in a continuing study of the action of aspirin.

A grant of $1,500 was accepted from the Iowa Lions Sight-Conservation Foundation for use by the eye bank which Lions Club contributions have helped to establish in the Department of Ophthalmology.

Dr. H. M. Burian, professor of ophthalmology, received $500 to assist him in continuing his studies on the human electroretinogram.

A total of $608, given by Mr. Arant H. Sherman, a Davenport businessman, will establish two tuition scholarships in medicine.

The Board accepted $300 from the Cystic Fibrosis Association for research on cystic fibrosis of the pancreas which is being directed by Dr. R. G. Frazier, assistant professor of pediatrics.

EMERGENCY SURGERY FOR GP'S

The University of Minnesota announces a continuation course in emergency surgery for general physicians, to be presented at the Center for Continuation Study on its Minneapolis campus January 30-February 1, 1956. The management of various types of injuries will be taken up in detail, along with certain other common surgical emergencies. The course will be under the direction of Dr. Owen H. Wangensteen.

Iowa Academy of General Practice

CATEGORIES OF ACCEPTABLE POSTGRADUATE STUDY

It is well known that continuing postgraduate study is required of each member of the American Academy of General Practice, and there are many who regard that requirement as basic to the continued success of the organization. Questions about postgraduate courses arise frequently in the minds of members and friends alike, and Academy officers are always glad to answer them.

As in the past, there are two classifications of postgraduate work on which the Academy gives credit toward the maintenance of membership. But the terms "Formal" and "Informal" have been replaced by "Category I" and "Category II," respectively.

The following are quotations from instructions issued by the Commission on Education of the AAGP:

"The Commission on Education reviewed and studied the definition of acceptable postgraduate study at its meeting in Kansas City, September 2 and 3, 1955. Its recommendations were considered and approved by the Board of Directors on September 4. The chief purpose of the changes and additions is to clarify the definition, explain what is meant by 'sponsorship,' and make it easier for members to determine in advance the proper classification of a particular program."

"Any organization desiring to state on their official announcement of a postgraduate program that members of the American Academy of General Practice will receive a specified number of hours of credit, under either Category, must have written authorization from the regional representative of the Commission on Education. A statement from a local or State Chapter of the American Academy is not sufficient—it must be authorized by the Commission on Education through one of its regional representatives. All courses in all categories must be of high educational, ethical and medical standards."

DEFINITION OF SPONSORSHIP

Sponsorship by the American Academy of General Practice or by any of its constituent state or territorial chapters is defined as the Academy's taking an *active* part or having one of its members on the program committee for the course being offered. That committee member, furthermore, must be on an AAGP national, regional, territorial, state or local chapter program committee or education committee, and he must actually participate in planning the course. AAGP sponsorship is not to be confused with mere endorsement or approval of the quality of the course being given.

Excess hours of credit accrued under Category I may be applied to Category II.

No course shall be approved under Category I unless its administrator shall furnish to the American Academy of General Practice certification of each member's attendance at the course on a form provided by the American Academy of General Practice.

The requirement for continued membership in the American Academy of General Practice is 150 hours of credit each three years, of which no fewer than 50 hours shall be in Category I.

An attempt has been made to make it easy for each doctor to evaluate any course of lectures. If he has the slightest doubt about the category to which the course belongs, he should check with someone who knows before he takes the course, rather than after he has spent his time. Questions from Iowa physicians should be addressed to Donald H. Kast, M.D., Secretary, 911 Bankers Trust Building, Des Moines 9.

POSTGRADUATE WORK FOR WHICH AAGP MEMBERS RECEIVE CREDIT

Category I

(a) Attendance at any postgraduate course given by an accredited medical school or recognized postgraduate medical school

(b) Attendance at any course sponsored by the AAGP or any of its state or territorial chapters, or by a medical school administrator, approved in advance by the regional advisor of the Commission on Education and processed and disseminated by the AAGP or its state and territorial chapters

(c) Attendance at the Annual Scientific Assembly of the AAGP

(d) Attendance at the annual scientific assembly of a state chapter of AAGP, provided it is approved in advance by the regional advisor of the Commission on Education

(e) Publication of a scientific paper in a state or national medical journal, presentation of an original scientific paper to a medical audience at county level or above, or preparation and presentation of a scientific exhibit at a medical meeting at county level or above (10 hours' credit)

Category II

(a) Attendance at the scientific meetings of the AMA

(b) Attendance at local and state medical society meetings

(c) Attendance at hospital staff scientific conferences and clinical pathologic conferences

(d) Attendance at postgraduate seminars and assemblies not included in Category I

AAGP SCIENTIFIC ASSEMBLY

The Annual Scientific Assembly of the American Academy of General Practice will be held in Washington, D.C., on March 19-22, 1956. Business meetings of the Congress of Delegates start on March 17 and should be attended by those who wish to see how the Academy's business is handled.

A hotel reservation form is printed on page 175 of the October issue of GP. Make your reservations now, and start planning to attend. It is important.

MENTAL ILLNESS

RESIDENT THERAPY FOR SERIOUSLY DISTURBED CHILDREN

It is generally accepted that people become afflicted with psychiatric illness because of the environments in which they have grown up. Thus, in a manner of speaking, there are families in which each generation communicates its emotional disorders to its successor. Psychiatrists are always looking for ways of putting a stop to this vicious cycle.

They are gradually beginning to attack the problem through the use of psychotherapy in their private practices and through referrals to mental health centers, where both children and parents can be given therapy designed to alleviate the malady that they have in common. Most "problem child" situations are amenable to one or the other of these sorts of treatment.

TYPES OF CHILDREN NEEDING EMOTIONAL HELP

Occasionally, however, there are families in which the circumstances are so difficult as to be irremediable and in which the parents are so seriously ill, emotionally, that they cannot tolerate treatment. In such homes, children have no chance of satisfying their emotional needs, and every day they are being further traumatized by their parents' actions. Under such conditions, the only thing to do is to remove the child from his home and to treat him in an institution for seriously upset youngsters. There is no acceptable alternative. A child who is allowed to stay in a damaging environment often becomes a delinquent or eventually becomes either a psychotic or a latently psychotic individual, and whichever course he takes, his life will be ruined and society will be burdened with the expense of caring for him.

In some other cases, institutional care and treatment are necessary for compartively short periods. These are the families in which a definite and vicious cycle of interpersonal conflicts has grown up between parent and child. The parent is the one in whom the emotional disturbance first arose, but the child has begun to react with a great deal of defensiveness and hostility. If arrrangements can be made for the child's receiving some form of psychiatric care and youth activity outside his home for a period of six months or a year, the parent and child may subsequently be able to live together without doing further mental harm to one another. In the meantime, of course, psychiatric care or health-center attention for the adult is necessary.

It has also been found that resident therapy for children who are delinquent or pre-delinquent is helpful. Many of these children have very traumatic backgrounds, and many come from broken homes. Often the parents themselves are delinquent or are lacking in responsibility. It may not be readily apparent that a delinquent or pre-delinquent child is deeply concerned about his parents' antisocial behavior and neglectfulness, for the malicious mischief or outright crimes of which he is guilty seem, more often than not, intended to injure the community rather than just his father and mother. But the motivation, none the less, is strictly a family affair, and since the youngster has found a satisfying outlet for his feelings, he will continue in his chosen behavior pattern for as long as he is left in his home. The police and the courts are providing him a means of punishing himself for his feelings of inferiority and for the other negative and destructive impulses that his parents have engendered through their rejection of him.

It must be remembered, however, that taking such a child from his home does not constitute a solution of the problem. He has already learned to react toward society and toward individuals in a delinquent manner, and a great change must take place in his personality before he can safely be returned to society.

Unfortunately, some children become psychotic even as early as age five or six. They cannot be cared for at home and must be removed to a resident therapy center.

Thus, there are three types of children who often need resident therapy: (1) those whose interpersonal relations are very poor, (2) delinquent children and (3) psychotic children.

AN IOWA PROGRAM FOR RESIDENT THERAPY

I am familiar with one setup for the residential treatment of seriously disturbed children, the one at the Lutheran Children's Home, in Waverly. The clinical team there consists of the psychiatrist, the psychologist and the psychiatric social workers.* Most of the treatment is administered by the psychiatric social workers, and the psychometric and diagnostic testing is the responsibility of the psychologist. These trained individuals are super-

* For further information, see: HANDBOOK OF RESOURCES AVAILABLE TO PHYSICIANS, The Iowa State Medical Society, 1954, p. 81.

vised by the psychiatrist, who acts as a consultant but does not usually participate in the actual interviews with the patients after the initial work-up.

The team undertakes, first, to diagnose and evaluate each child who is sent to the treatment center. His past history, his environmental circumstances, his personality problems and his I.Q. —all of these are carefully studied. Next, the clinical psychologist, the social service staff and the psychiatrist confer about him, in an effort to discover his basic difficulty and its probable causes. Because the "house parents" in charge of the building to which the child has been assigned, along with several other children, will have important roles in whatever treatment is decided upon for him, they too are participants in the conference.

Most of the children seen at the residential treatment center of the Lutheran Children's Home are deprived, in the sense that their appetites for love, affection, understanding, approval, respect and guidance have been inadequately met by their parents and by the other adults in their home environments. The "house parents" are instructed regarding the things that the child under discussion has a compelling emotional need for, and which they must provide him if he is to regain his mental health. The psychiatrist and the others of the staff attempt to predict and to help the "house parents" anticipate the response that the child will make. His father and mother are described to them, and the difficulties that are likely to arise as the youngster undertakes to adapt to group living are outlined for them. Though the child, himself, is not present, this conference, basically, is an attempt to introduce him to each of the adults with whom he is to come into contact. All of them are asked not to consider him as a bad child, but to understand that he has problems that need to be worked out.

Then the child is assigned to a psychiatric social worker, who will see him for 45 minutes once, twice, three or four times each week, depending upon his needs. The counselling will last from one to three years. After the child has been admitted, he is encouraged to participate in the various sports, occupational therapies, etc. that are available and that it is felt will help in his rehabilitation.

The grade school children attend classes on the campus. It is well known that school is one of the areas in which disturbed children frequently manifest their difficulties and behavior problems. For that reason, it is definitely advantageous that the school is located on the grounds. Classes are limited to approximately 12 children, so that each teacher can cooperate with the caseworkers, "house parents" and the rest of the staff in remedial work with individual children.

Children in and above junior high school attend the Waverly Public Schools. The case workers meet frequently with their teachers, at the beginning of the school year and usually near the end of each six-weeks period, or when discussion of the needs and problems of individual children seems particularly necessary, from the standpoint either of the school or of the institution. It is tremendously important that the teachers have a thorough understanding of the needs and problems of these children in order to help them on the road to recovery. Experience indicates that high school students tend in a lesser degree to carry their difficulties to school and to act them out in the classroom, but, nevertheless, there is necessity for frequent conferences between caseworkers and high school teachers.

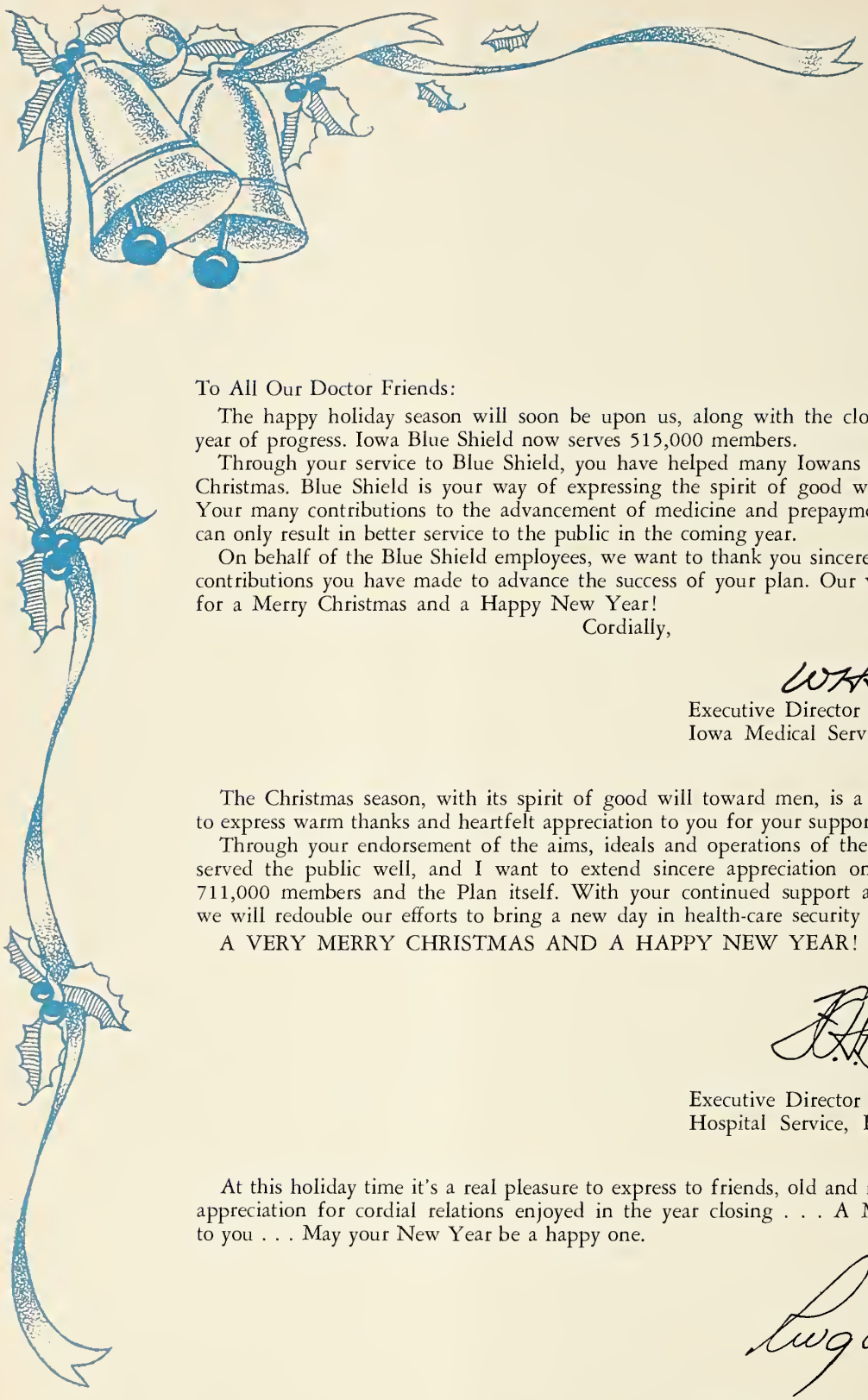
Provision is made also for the spiritual needs of the children, under the direction of a pastor who is a staff member. In addition to church activities in the community, there is a definite spiritual element built into the total therapeutic program of the institution. The goal is to integrate Christian values into the daily lives of the children, to aid them in developing well-rounded personalities.

The treatment center actually attempts first of all to fulfill the needs of the child, and second, in psychotherapy, to help him change his attitudes toward other people, toward himself and toward society so that his natural feelings, which heretofore have been expressed in unhealthy ways, can be given healthy expression. The center attempts to replace attitudes of fearfulness with attitudes of faith and trust—and, above all, with understanding and love. The harmful attitudes that the child has maintained must be replaced by sound concepts. Most important of all, he is helped to understand himself, to understand what has happened to him, to understand why he acted and felt as he did and to find a way out of his fears, hates, self-depreciation and guilt, toward faith, love, and understanding and appreciation of himself as a potentially worthwhile citizen.

CONTINUATION COURSE IN NEUROLOGY

Neurology will be the subject of a continuation course presented by the University of Minnesota at the Center for Continuation Study on its Minneapolis campus February 6-10, 1956. Intended primarily for physicians in general practice, the program will have appeal also for neurologists and neurosurgeons. The most commonly seen neurological symptoms and syndromes will be stressed.

The guest faculty will include Dr. William M. Meacham, associate clinical professor of surgery at Vanderbilt; Dr. Morris B. Bender, professor of clinical neurology at New York University; Dr. John F. Sullivan, head of the Department of Neurology at Tufts College Medical School; and Dr. Oliver H. Lowry, head of the Department of Pharmacology at Washington University School of Medicine, St. Louis.



To All Our Doctor Friends:

The happy holiday season will soon be upon us, along with the closing of another year of progress. Iowa Blue Shield now serves 515,000 members.

Through your service to Blue Shield, you have helped many Iowans enjoy a merrier Christmas. Blue Shield is your way of expressing the spirit of good will toward men. Your many contributions to the advancement of medicine and prepayment health plans can only result in better service to the public in the coming year.

On behalf of the Blue Shield employees, we want to thank you sincerely for the many contributions you have made to advance the success of your plan. Our very best wishes for a Merry Christmas and a Happy New Year!

Cordially,

W. H. Sherin

Executive Director
Iowa Medical Service

The Christmas season, with its spirit of good will toward men, is a wonderful time to express warm thanks and heartfelt appreciation to you for your support of Blue Cross.

Through your endorsement of the aims, ideals and operations of the Plan, you have served the public well, and I want to extend sincere appreciation on behalf of our 711,000 members and the Plan itself. With your continued support and cooperation, we will redouble our efforts to bring a new day in health-care security to every family.

A VERY MERRY CHRISTMAS AND A HAPPY NEW YEAR!

R. H. Hatton

Executive Director
Hospital Service, Inc., of Iowa

At this holiday time it's a real pleasure to express to friends, old and new, our sincere appreciation for cordial relations enjoyed in the year closing . . . A Merry Christmas to you . . . May your New Year be a happy one.

Lud Conn

President
Associated Hospital Service, Inc.

Your Blue Shield President Reports:



Among the matters discussed at the meeting of your Board of Directors on October 22, 1955, was the preliminary report of the Medical Advisory Committee and its work toward the development of a more realistic Blue Shield fee schedule. The following propositions were approved in principle: (1) A higher income schedule based on realistic present charges made by physicians in Iowa should be adopted; (2) The program seems adequate, with some changes in outstanding inequities; and (3) When the fee schedule for a higher priced plan is finally adopted, the lower schedule should be adjusted proportionately, either by use of a percentage or by some other equitable means.

At a number of district and county meetings we have discussed the progress that is being made toward the development of a contract for people of the higher income level. There have been excellent discussions at those meetings, and the gists of them have been reported to the Medical Advisory Committee. At all of the meetings, doctors have been told of the Board's proposal that any $6,000 income plan that is formulated shall be presented to the House of Delegates of the ISMS for final consideration. Prior to the State Society meeting at which it is to be presented, copies of the proposed plan are to be mailed to the county societies for their consideration, so that delegates may be properly informed and instructed.

It is our hope that the doctors throughout the state will have a clear understanding of the progress we are making. We shall endeavor to make sure that all are familiarized with the details of the proposed contract before it comes up for final vote.

We welcome your suggestions. Now is the time to submit them, so that they may be given careful study.

Sincerely,

Martin L. Olsen M. D.

President

THE DOCTOR'S BUSINESS



Invest Wisely!

MILLARD K. MILLS

WATERLOO

In previous issues of the JOURNAL I have suggested, successively, that you give careful study to your income, your business and your "Class B" expenses, your taxes and your insurance. What remains should be your maximum net gain—the amount from which you can expect to build your estate. What you do with that money will mean a great deal to you and your family.

Before investing any of it, you will want to be certain that you keep enough cash in your bank accounts or in government bonds to cover your current expenses for approximately 90 days.

Your first investment, naturally, will be in your practice. Since it is likely to produce the best rate of return that you can get, be sure that you have a good layout, an attractive office and modern equipment. Next, see that your home needs are taken care of. Then put your money to work for you. Don't just let it accumulate!

The following table shows how investments of $500 a year will snowball, provided that dividends or interest are reinvested:

No. Years	2%	3%	4%	5%	6%
5	$2,602	$2,654	$2,708	$2,762	$2,818
10	5,474	5,731	6,003	6,288	6,590
15	8,646	9,299	10,011	10,789	11,637
20	12,148	13,435	14,889	16,532	18,392
25	16,015	18,229	20,822	23,863	27,432
30	20,284	23,787	28,042	33,219	39,529
35	24,997	30,231	36,826	45,160	55,717

What can be accomplished simply through the regular reinvestment of dividends or interest is spectacular. If one multiples $500 by 35, the answer is $17,500; if one invests $500 a year for 35 years at five per cent yield, and invests his dividends too, he accumulates $45,160. This is only one example of the value of wise, systematic and uninterrupted investment.

TWO TYPES OF INVESTMENT

Your portfolio should be well balanced between fixed or guaranteed dollar contracts and flexible ones. Thus, both during inflation and during depression the purchasing power of your dollars will be protected.

Dollar contracts include retirement income annuities, face-amount installment certificates, government bonds, savings and loan accounts, first mortgages and high grade corporate bonds. These contracts guarantee a certain interest, and they are virtually certain always to be marketable at almost exactly the price you paid for them.

Flexible contracts include common stocks, investment trust shares, farms and rental properties. The value of investment trusts lies in the diversification of ownership, the dollar averaging of cost over a period of several years and the expert supervision that is provided. Few doctors have time to follow the stock market closely. For that reason they find investment trusts attractive, despite the "loading charge" they must pay when they invest their funds in that way.

Farm and rental properties should be under the direction of management firms to assure a good return to the doctor.

More speculative investing should be limited strictly to "surplus" funds, if a doctor wants to protect his future. Oil wells, businesses, orchards, etc. require real "know how" and close supervision.

In building your estate, you will not want to overlook the tax angle. Estate taxes can be costly. You will want to be certain you qualify for the marital deduction. Unless you see that your estate is properly set up, your wife may discover after your death that in spite of your earnings, your investments and your other plans, she is not to receive the benefits you expected her to. Uncle Sam will get his legal share. Be sure you get yours!

A competent investment advisor can be invaluable to you. Select your counselor carefully, and then let him guide you.

As you see your estate grow and your future become secure, you will know that you are well on the road to financial success.

Mr. Mills is general manager of Professional Management.

WOMAN'S AUXILIARY NEWS

Mrs. Edw. B. Hoeven, *Woman's Editor*
224 East AltaVista, Ottumwa

Mrs. Wilson Wolfe, *Asst. Woman's Editor*
N.E. Elm Street, Ottumwa

LINES FROM THE PRESIDENT

"It is more blessed to give than to receive"—that is my message to you this Christmas time. Gifts that cost nothing are frequently of greatest value to their recipients; they are spiritual gifts that are returned to the giver even as he bestows them. They never fail to convey your thoughtfulness and your affection.

Though they have much in common, these presents are of several sorts:

The gift of praise. Appropriate mention of a deed well done inspires an up-and-up feeling.

The gift of service. Doing things for a friend, especially performing little acts of kindness and offering congratulations or sympathy, can brighten both your lives.

The gift of inspiration. Give your friends confidence in the work they are doing by letting them know that you think it is important.

The gift of concession. One should learn to recognize the time for saying, "You are right and I am wrong. Thank you for showing me."

The gift of consideration. Put yourself in another's shoes. Discover what your friends would be most pleased to have you say or do.

The gift of gratitude. Never forget to say, "Thank you"; never overlook even the least favor; and never fail to mean what you say.

The gift of physical presence. In sickness, in trouble or in exultation, your friends will be most sure of the sincerity of your offer of help or of your good wishes if you offer them in person.

Though perhaps it isn't quite fair for us to expect to profit from our good deeds, it is none the less true that nothing pays so well as being an intelligent giver.

But remember these essentials: You must give yourself along with your gift. These gifts are of infinitely greater value than mere physical gifts can be.

Dr. Flynn, Gail and I join in wishing to all of you and your families the love, peace and happiness that are CHRISTMAS!

Mrs. Charles H. Flynn
President

NIGHT CALLS

The one emergency case that goes untended creates a tremendous public relations problem for the entire profession. Here's what happened in one midwestern city recently:

At 5:45 a.m. one Sunday a frantic father told a telephone operator his five-year-old daughter was in convulsions and that he could not remember the telephone number or spelling of his doctor's name. The operator quickly traced the doctor and put through a call to him. His wife answered and berated the operator for calling the doctor so early. When the father was put on the line and explained that the inhalator squad had already been called to his home to revive the child, the wife finally allowed him to speak to the doctor. The physician agreed to accept the call. The doctor's wife then came back on the line and told the operator not to ring them for any more emergency calls, and the doctor reiterated the request in somewhat abusive terms.

Because of the telephone operator's persistence, tragedy was averted. The doctor admitted to the father he was glad the parents insisted on his coming at once, as the little girl was more seriously ill than he had imagined. The grateful mother later wrote a letter of appreciation to the telephone company praising the efforts of the operator in securing a doctor. The telephone company got good public relations out of the incident, but how much ill will was engendered by the attitude of the physician and his wife in this instance? The telephone company official who reported the incident stated in a letter that there were "too many such occurrences."

The medical profession has accepted the responsibility for providing emergency medical care. What can the profession do to assure that individual physicians do not shirk this responsibility? The physician's wife must understand the nature of this responsibility, too, since she often can do irreparable harm to the public relations of the individual doctor. Public relations is more than just the responsibility of the physician—it is the responsibility of his wife, his family, and all those associated with him in his practice.

—"PRoblem Corner," J.A.M.A., 159:486-487, (Oct. 1) 1955.

DECEMBER REMINDERS

1. Send GIFT subscriptions to TODAY'S HEALTH.
2. Help your community observe Safe-Driving Day.
3. Elect officers in your county Auxiliary for 1956 this month or soon. Send the list to Mrs. Robert P. Mason, secretary.
4. For the Annual Meeting, elect one delegate for each 25 of your members. Send the list to Mrs. Hazel Lammey.
5. Send your necrology list to Mrs. Charles H. Flynn.
6. Collect dues and send them to Mrs. E. A. Vorisek.
7. Make gifts to AMEF in memory of loved ones. Send checks to Mrs. Harold Spillman.
8. Subscribe to the BULLETIN ($1.00). Send checks to Mrs. F. B. Leffert.
9. Make an extra gift to the Nurses Loan Fund. Mrs. E. A. Larsen is state chairman.
10. If you haven't had a district meeting, plan one for early in the new year. Your president would like to be invited to attend it and to meet the doctors' wives of your area.
11. Send your recommendations for next year's work on the state level to Mrs. D. H. King.



NEWS AND VIEWS

Everywhere the stores are filled with people buying for the Christmas season. Crowds surge in and out of buildings, up and down streets, and the whisper of movement is like the subdued rush of deep waters.

Everywhere there is evidence of great prosperity. But mostly the crowds are solemn. Prosperity, like the gold of Midas, has not given contentment or peace of mind to the American people.

From habit people say, "Merry Christmas," but too often there is no conviction in their words, no sincerity, no projection of the radiant inner joy and good will toward men that can spring only from a happy heart.

Santa Claus has replaced the Child in the manger as a symbol of Christmas; Santa has become sophisticated; he has gone into government—national, international and global. No longer does he sit all year at the North Pole making toys for good children. Now he sits in Washington, presiding over your money, and yours and yours, packaging and mailing it to remote parts of the world. When, as if by accident, he returns some of it to you in the form of a subsidy, it is no more than a token amount, and really it is a means of buying your friendship.

What have the American people done that they should be forced to buy or beg for the hollow, transient friendship of the people in other parts of the world? Why should Americans feel guilt or shame because an abundance has been made possible by their Constitution?

Why must pride of country bow its head in the dust of old world intrigue?

When those questions are answered, Santa Claus can go back to the North Pole, the star over Bethlehem will glow with brighter radiance, and Americans, once again, will mean it when they sing out, "Merry Christmas."

In the January issue of the WOMAN'S AUXILIARY NEWS, look for the report by Mrs. Flynn and Mrs. King on the National Conference of Officers, State Presidents and Presidents-Elect that they attended in Chicago, November 1-5.

Dr. and Mrs. L. A. Coffin and Mrs. Flynn attended the Mississippi Valley Tuberculosis and Trudeau Society meeting in Des Moines as representatives of the Iowa State Medical Society and its Auxiliary.

The Woman's Auxiliary to the Wapello County Medical Society met on November 1 in the home of Mrs. Robert Dallager. Mrs. Robert Meyers was in charge of the program. Plans were completed for the Harvest Dinner held on November 22. Mrs. D. O. Bovenmeyer, chapter president, presided.

The Auxiliary to the Polk County Medical Society met for a luncheon on October 10 at the Hotel Fort Des Moines. After a short business meeting, Mr. Ray Stewart, director of public relations for the State Medical Society, gave a very interesting talk. Informal bridge followed.

The Polk County Society and its Auxiliary sponsored a hostess room at the Hotel Savery on October 31 for nurses attending the convention of the Iowa State Nurses Association. Mrs. Walter Anderson was committee chairman, and other members of the Auxiliary assisted her.

The Worth County Medical Auxiliary met at the Paramount Cafe, Northwood, on October 19 for a special business meeting. Members voted to send $3.25 to the Nurses Loan Fund. A special mental health program is being planned for presentation at the May meeting of the PTA. All schools and libraries are being asked to subscribe to TODAY'S

health. A Christmas party with the doctors will be held late in December.

A social hour, with coffee and dessert followed the business session.

Shirley Hanzlick represented Page County Future Nurses at the 1955 Governor's Conference on Children and Youth, held at Ames on October 26. She was one of the teen-agers who participated in a panel discussion on employment of youth. The theme of the conference was "growing up today."

The Woman's Auxiliary to the Boone County Medical Society entertained senior-class girls from the high schools at Boone, Ogden, Madrid, Pilot Mound, Boxholm and Napier-Jordan on the afternoon of October 20 at the Holst Hotel, Boone, for the purpose of interesting them in careers in nursing. Mrs. Ralph Wicks served as general chairman, assisted by Mesdames G. H. Sutton, John Wall, Robert Manderscheid, John Herman, B. T. Whitaker, R. E. Gunn, T. E. Kane, Hanley Jenkins, Wallace Puntenney, E. E. Linder, A. B. Deering, Frank Creamer, W. H. Longworth and T. K. Leonard. Mrs. D. H. King, of Spencer, was one of the guests.

The Clinton County Auxiliary is planning a charity ball, to be held on December 3. Mrs. R. J. Nelson is general chairman for the event.

"He who keeps everything for himself must lose it all at death; he who has given it all away will get it back in immortality and joy."

—Bishop Fulton J. Sheen

PUBLIC'S VIEWS ON HEALTH COSTS

Forty per cent of American adults believe food costs are much too high; 45 per cent believe auto and TV repair prices are excessive; 27 per cent are equally critical of clothing prices; but only 26 per cent think the costs of medical care are much too high.

These figures are from a report of a national survey of opinions and attitudes just released to the pharmaceutical industry by the Health Information Foundation, of New York.

Although medical costs in general came in for less criticism than did other elements of the cost of living, within the category the percentage believing that doctors' fees are much too high was 16 per cent; hospital charges 39 per cent; dentists' fees 24 per cent; and prescriptions 38 per cent. Fifty-six per cent of the population cannot give the name of a single company that they believe manufactures a new or "wonder" drug.

FAIRS AS MEDICAL P-R MEDIA

The Illinois State Medical Society has found state and county fairs to be excellent—and inexpensive—means for reaching the public. An example is the Illinois State Fair, at Springfield. The Illinois Society's exhibit there this year was prepared by Dr. Jacob E. Reisch, of Springfield, the councilor of the Fifth District, with the cooperation of the Sangamon County Woman's Auxiliary.

If one supposes that the Medical Society's exhibit draws attention from no more than 10 per cent of the 70,000 people who attend the Fair (and both of those figures are extremely conservative), the cost of the exhibit is no more than one cent per viewer. Major items in the $700 annual cost are a union movie operator for 10 days, transportation charges on the exhibits, labor for setting them up and tearing them down, and booth rental. The AMA provides the displays and supplies pamphlets giving health pointers. About 75,000 leaflets are passed out. Auxiliary members staff the booths.

"We have found that movies must be 'shorts'—five to seven minutes—and color film is best," the Society reports. "Animated, or cartoon, pictures attract the most attention and hold interest. The longer and more serious educational films are not appealing to the transient audience.

"Exhibits with an handle to pull, or a button to push, are the ones most closely inspected. Those with graphs or statistical tables are passed by. If you really want to stop the people, put a scale in the exhibit.

"The types of people attending the Illinois State Fair are variable. The Fair draws a large attendance of farm people. However, other classes are well represented. We have had school teachers pick up a supply of leaflets for distribution to their pupils."

At this year's Fair, the Illinois State Medical Society had a 20-foot display exposing some of the quacks of today, and methods for preventing accidental poisonings was the subject of another exhibit. Films dealt with safe weight-reduction methods, "How to Catch a Cold" and the prevention of rheumatic fever.

The Illinois Society concludes that "the public each year has shown a greater interest in the medical exhibits. This year's meeting continued the trend."

MARCH OF MEDICINE

The next "March of Medicine" telvision program, entitled "Alcoholism—the Revolving Door," will be presented at 9:30 p.m., Sunday, December 4, over the NBC-TV network. This one of the Smith, Kline and French shows will employ a technic similar to that used in "We, the Mentally Ill" which proved popular with TV viewers last spring.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmerer
COMMISSIONER

IOWA'S SALK VACCINE PLAN

I. The State Department of Health has been designated by the governor as the single agency to administer a poliomyelitis vaccine distribution program. An advisory committee has been appointed by the governor, with the following membership: E. G. Zimmerer, M.D., Commissioner of Health, chairman; Lee F. Hill, M.D., pediatrician; Mr. W. Nieman, state chairman of the National Foundation for Infantile Paralysis; Mrs. Charles T. Cownie, of the Des Moines Board of Education; Mr. James E. Harrigan, an auto accessories dealer; and Mr. D. L. Bruner, secretary of the Iowa Pharmaceutical Association. All of them live in Des Moines.

II. A. The Department of Health will purchase and distribute, from funds derived from state appropriations or from the grant allotment under the Poliomyelitis Vaccination Assistance Act, such quantities of vaccine as may be needed for children in priority age groups in state institutions, schools and hospitals, and in private, non-profit children's homes and orphanages.

B. The Department of Health will purchase and distribute, from grant funds, such quantities of vaccine as may be requested by local governmental subdivisions (counties, cities, schools), county medical societies, or non-profit organizations, for use in public vaccination programs.

C. All vaccine available to Iowa and not needed for purposes described in A and B, will be released for distribution through regular commercial distribution channels, with pharmacists and doctors assuming responsibility for equitable local distribution and use for priority age groups.

III. A. Any vaccine purchased by the Department with Poliomyelitis Vaccination Act funds will be used only for the vaccination of children under age 20 and for expectant mothers.

Priority age groups, as recommended by the National Advisory Committee and approved by the State Advisory Committee, will be adhered to. Provisions will be made for the maintenance of records to show the age of the recipients of the vaccine under paragraphs II A and B of this plan.

B. Physicians, pharmacists, health officers, schools and other groups will be kept informed about the program through news releases, bulletins, radio and television news releases and through the Department's regional offices.

1. For public agency programs on the local level (county, city, school, medical society, non-profit organizations) a policy of procedure will be disseminated and adherence required as a condition for use of vaccine purchased by the Department. The conditions will include the following major points: (a) Use of the vaccine must be limited to pregnant women, and children within the priority age group approved by the State Advisory Committee at the time of the local program. (b) Assurance must be given that any public agency vaccination program using vaccine furnished by the Department either to the physician's office or to the clinics, will apply no means test or other discrimination based on financial ability of the individuals. (c) The Department will assure the equitable distribution of the vaccine (1) by reviewing the invoices received from wholesale and retail pharmacists; (2) by requesting physicians to maintain records of persons to whom the vaccine is administered as well as the name of the manufacturer and the lot number of the product.

2. It is estimated that approximately 10 per cent of the total allotment of vaccine available to the state will be purchased by the Department for distribution under item II A of this plan, and an additional 10 per cent of the total vaccine allotment will be purchased by the Department for distribution under item II B of this plan. The remaining 80 per cent of the total vaccine will be available for distribution through regular commercial channels, and responsibility for equitable distribution will rest with the distributors.

C. The State Department of Health will make such reports in such form as the surgeon general or his designee may from time to time reasonably require.

D. It is anticipated that poliomyelitis vaccine distribution funds, available as general health earmarked grant, will be used only for direct services to the distribution program and therefore can be validated under method No. 2 described in Part 13-3. 16F7 of the Health Grants Manual.

For the poliomyelitis vaccine funds alloted under Section 3 (a) (2) of the Act, validation will also be made under method No. 2, and none will be used except for direct service to the program.

E. The budgeting, accounting and other fiscal procedures, as described in the Plan for Executive Operations, and regularly used by the Department

of Health, will be utilized by the Department for the poliomyelitis vaccine purchase and distribution funds.

The above program was approved by the U. S. Public Health Service, October 19, 1955. It is now ready to be put into operation.

DISTRIBUTION OF VACCINE

Physicians in need of vaccine for use for any state, county, city or any other non-profit organization may procure it from the State Department of Health.

Requests for vaccine for public clinics for non-institutionalized persons should be submitted to the State Department of Health through the county poliomyelitis vaccine distribution committee. This procedure should serve (a) to keep the local (county) committee informed regarding all vaccine coming to its area from the State Department, and (b) to let it know the groups or persons receiving the vaccine.

Requests for vaccine for those uses should include the name of the physician to whom the vaccine is to be sent and his address.

RECORDS

For vaccine distributed from the State Department of Health, record forms will be included in the package. Completed forms are to be returned to the State Department.

For the commercial vaccine purchased by the physician, the State Department of Health will expect to receive no records or reports. It is expected, however, that the physician will keep his own records, including such items as the producer of the vaccine and the lot number. This is a wise precaution for the physician to take, since an investigation of undesirable vaccine reactions may become necessary.

ELIGIBLE GROUPS

In July, the medical advisory groups suggested that children from five through nine years of age and pregnant women should compose the eligible groups in Iowa, and their advice was followed.

On October 14, because more vaccine was becoming available, the U.S.P.H.S. advised extending eligibility. Therefore, until further notice, the age group has been enlarged to include all children from three through 12 years. Pregnant women will continue to be eligible for the vaccine.

U. S. TUBERCULOSIS STATISTICS, 1954

A total of 100,540 tuberculosis cases were newly reported in the continental United States during the calendar year 1954. Of them, 78,592 (78 per cent) were classified as active or probably active, a decline of 6 per cent from the 83,250 active cases reported in 1953.

The decline of 6 per cent in the number of new active cases reported is due to administrative changes in reporting practices in some states as well as to an apparent decline in the incidence of the disease. Eighteen states reported an increase in total numbers of active and probably active cases, but 31 states reported decreases. Of the 31, there were 16 that had decreases of less than 10 per cent.

The decline in mortality continues to be more pronounced than the decline in newly reported cases. Provisional tuberculosis deaths, as reported by state health departments, show a decline of 17 per cent when compared with similar data for 1953. Only four states reported increases in the number of tuberculosis deaths, and eight showed decreases of less than 10 per cent.

New Tuberculosis Cases

State or Territory	Total Cases	Active and Probably Active		Tuberculosis Deaths[1]	
		Number	Rate[2]	Number	Rate[2]
Alabama	2,220	1,532	49.1	413	13.2
Arizona	1,532	1,532	154.3	245	24.7
Arkansas	1,456	1,220	63.9	268	14.0
California	7,904	7,904	63.0	1,100	8.8
Colorado	1,099	453	31.1	137	9.4
Connecticut	1,066	673	30.3	159	7.2
Delaware	289	235	64.0	38	10.4
Dist. of Columbia	1,075	763	88.6	123	14.3
Florida	2,461	1,912	54.3	277	7.9
Georgia	1,880	1,737	47.5	341	9.3
Idaho	134	100	16.3	24	3.9
Illinois	6,361	5,030	54.9	1,052	11.5
Indiana	1,729	1,502	35.7	382	9.1
Iowa	627	423	16.0	85	3.2
Kansas	401	399	19.8	118	5.9
Kentucky	2,921	2,498	83.4	452	15.1
Louisiana	1,819	1,568	53.6	330	11.3
Maine	299	290	31.2	73	7.8
Maryland	2,218	1,772	68.1	343	13.2
Massachusetts	2,361	2,340	47.2	499	10.1
Michigan	5,764	3,769	53.7	527	7.5
Minnesota	1,629	757	24.4	138	4.4
Mississippi	1,179	1,007	45.7	226	10.3
Missouri	2,101	1,886	45.4	509	12.3
Montana	413	229	36.5	62	9.9
Nebraska	244	235	17.2	53	3.9
Nevada	158	153	70.2	38	17.4
New Hampshire	149	118	22.2	29	5.5
New Jersey	3,650	2,104	40.1	519	9.9
New Mexico	908	705	90.3	113	14.5
New York	10,349	10,123	65.6	1,745	11.3
North Carolina	2,013	1,602	37.7	333	7.8
North Dakota	171	171	26.9	29	4.6
Ohio	6,494	4,407	51.5	776	9.1
Oklahoma	1,642	1,095	48.3	234	10.3
Oregon	636	601	36.7	84	5.1
Pennsylvania	6,774	3,590	33.3	1,222	11.3
Rhode Island	402	300	36.4	75	9.1
South Carolina	1,195	954	42.6	270	12.1
South Dakota	185	151	22.6	60	9.0
Tennessee	3,101	2,010	59.8	532	15.8
Texas	3,704	2,835[3]	33.5	909	10.7
Utah	156	139	18.4	32	4.2
Vermont	164	142	36.9	45	11.7
Virginia	2,640	2,115	58.9	450	12.5
Washington	2,216	1,426	56.1	124	4.9
West Virginia	1,181	995	51.1	247	12.7
Wisconsin	1,390	1,030	28.8	216	6.0
Wyoming	80	60	19.2	13	4.2
Continental United States	100,540	78,592	48.8	16,069	10.0
Alaska	976	760	365.4	99	47.6
Hawaii	490	423	81.0	45	8.6
Puerto Rico	4,520	3,783	168.6	861	38.4
United States and Territories	106,526	83,558	50.9	17,074	10.4

[1] Provisional mortality data.
[2] Per 100,000 population, estimated as of July 1, 1954, U. S. Bureau of the Census Current Population Reports Series P-25, No. 108. Population for Territories from unpublished data by U. S. Bureau of the Census.
[3] Partly estimated.

COUNTY SOCIETIES

Des Moines

Dr. Stuart Cullen, head of the Department of Anesthesiology at SUI, addressed the Des Moines County Medical Society, at the Burlington Golf Club on November 8, on "Depressant Drugs." "Pain," he said, "can be effectively relieved in one-third of 'pain' cases by the physician's prescribing salt pills or administering distilled water injections." He warned against using large quantities of drugs for that purpose, especially morphine and Demerol, and pointed out that what is thought to be pain can be no more than the attitude of a patient against an unfavorable situation.

Dubuque

At the November 8 meeting, the Dubuque County Medical Society heard Dr. John R. Hill, of the Mayo Clinic, speak on proctologic diseases. Afterward, the Society met with Blue Shield officials to discuss the development of a new surgical and hospitalized medical care policy that is being developed.

The December 13 meeting of the Dubuque County Society, to be held at the Bunker Hill Country Club, will be the annual session.

Hardin

Hardin county football coaches were guests of the Hardin County Medical Society at its meeting on October 11. Dr. W. A. Baird, orthopedic surgeon of the McFarland Clinic, Ames, and Mr. Beryl Taylor, athletic trainer at Iowa State College, were the speakers.

Linn

Under the joint sponsorship of the Linn County Medical Society and the Iowa Division of the American Cancer Society, three public meetings on cancer detection were conducted in Cedar Rapids during November. "Early Cancer Detection," was discussed on November 1 by a panel consisting of Drs. Ralph D. Hunting, Jr., and Richard G. Bausch, of Cedar Rapids, and Dr. R. H. Flocks, head of the Department of Urology at SUI. Dr. R. E. Weland, of Cedar Rapids, was moderator. On November 15, Dr. Addison W. Brown, of Des Moines, lectured on "Cancer in Women," and a film entitled "Breast Self Examination" was shown. Dr. Robert C. Hickey, assistant dean of the College of Medicine at SUI, spoke at the meeting held on November 28.

Polk

The December 21 meeting of the Polk County Medical Society will be held at the Des Moines V-A Hospital, beginning with dinner at 6:30 p.m. The scientific program, to be presented by the medical staff there, is to be a symposium on gastric ulcer.

Scott

Officers of the Scott County Medical Society for 1956 are Dr. H. M. Hurevitz, president; Dr. L. V. Schroeder, president-elect; Dr. T. W. McMeans, vice president; Dr. A. B. Hendricks, secretary; Dr. F. Dale Wilson, treasurer; and Dr. G. E. Morrissey, historian.

In conjunction with the Davenport Newspapers, Inc., the Scott County Society has held two public forums in Davenport during November, on "Poliomyelitis" and "Wonder Drugs," respectively. Approximately 800 people attended each of them.

At the December 6 meeting of the Scott County Society, Dr. Ben W. Lichtenstein, clinical professor of neurology at the University of Illinois, will present a paper on "Cerebro-vascular Disease: Clinical and Pathologic Aspects."

Woodbury

At the conclusion of the joint meeting of the Woodbury County medical and bar organizations at the Mayfair Hotel, Sioux City, on November 3, it was decided that a joint committee should be formed to work out a code for legal and medical business relationships and for testifying in court. It is planned, further, that a joint dinner meeting of lawyers and physicians hereafter will be held annually.

Instead of Dr. Franklin, of Skokie, Illinois, who originally was to have been the speaker at the November 20 meeting of the Woodbury County Society, Dr. Marvin Paul, physician for the Athletic Department at SUI, spoke on the subject of sports injuries.

Wapello

The December 6 program of the Wapello County Medical Society is to consist of a symposium on hypertension presented on sound film by Wyeth Laboratories. At the meeting on January 3, Dr. Delbert Neis, of the Department of Surgery at the University of Nebraska, will speak on "Surgical Therapy in Cardiac Disease."

PRO-BANTHĪNE® IN DUODENAL ULCER



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthīne.

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

"... our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility....

"Prompt relief of ulcer pain by ganglionic blocking agents ... coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine Bromide (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain, or in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

---

1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

SEARLE

WE CORDIALLY INVITE YOUR INQUIRY for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your eligible dependents.



SINCE 1902

ALL PREMIUMS COME FROM

PHYSICIANS SURGEONS DENTISTS

ALL BENEFITS GO TO

$4,500,000 ASSETS
$22,500,000 PAID FOR BENEFITS

PHYSICIANS CASUALTY AND HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

The Month in Washington

Washington, D. C.—If advance signs mean anything, the Eisenhower Administration next year can be expected to ask Congress for substantially more money for medical research, both direct research by scientists on the U. S. payroll and grants to others.

Currently the federal government is spending more money on medical research than at any time in history—almost $98 million through the National Institutes of Health alone. In addition, other millions are being spent on medical research in the Department of Defense, Veterans Administration and other agencies. Much of it is difficult to isolate in the federal budget.

A special committee named by the National Science Foundation at the request of former Secretary Hobby has been at work for some time on an appraisal of HEW's medical research programs. Its report, due before the reconvening of Congress, should be valuable to both the administration and the appropriations committees.

A few examples of what is happening this year:

National Cancer Institute has $24.8 million to spend, about three million more than last year, with two-thirds going out in grants to non-federal researchers. National Heart Institute also is working on a much more liberal budget, $18.7 million in contrast to last year's $16.6 million. Because of the spectacular publicity now being given to heart research as a consequence of President Eisenhower's illness, it is a foregone conclusion that next year this institute will get a great deal more money.

The Mental Health Institute is profiting by the largest single increase of any research operation, almost $4 million, from $14.1 to $18 million. Here again the prospects are for a substantial increase next year; problems of mental health are receiving much public attention, a situation that will not be ignored by Congress. Furthermore, the nationwide survey of mental health problems now about to get under way will point up the shortcomings in mental health research, and be an additional argument for more U. S. dollars.

All the other research institutes also shared in last session's Congressional generosity. The Institute of Arthritis and Metabolic Diseases has about $2.5 million more, $10.7 million instead of the $8.2 million of last year. The Institute for Neurological Diseases and Blindness went from $7.6 million to $9.86 million, the Microbiological Institute from $6.1 million to $7.5 million, and the Dental Health Institute from $1.9 to $2.1.

As has been customary with recent Congresses, Senate and House this year actually voted more money for medical research than the Bureau of the Budget permitted Public Health Service to

KARO SYRUP

BELONGS IN THIS PICTURE!

...a carbohydrate of choice
in milk modification for 3 generations

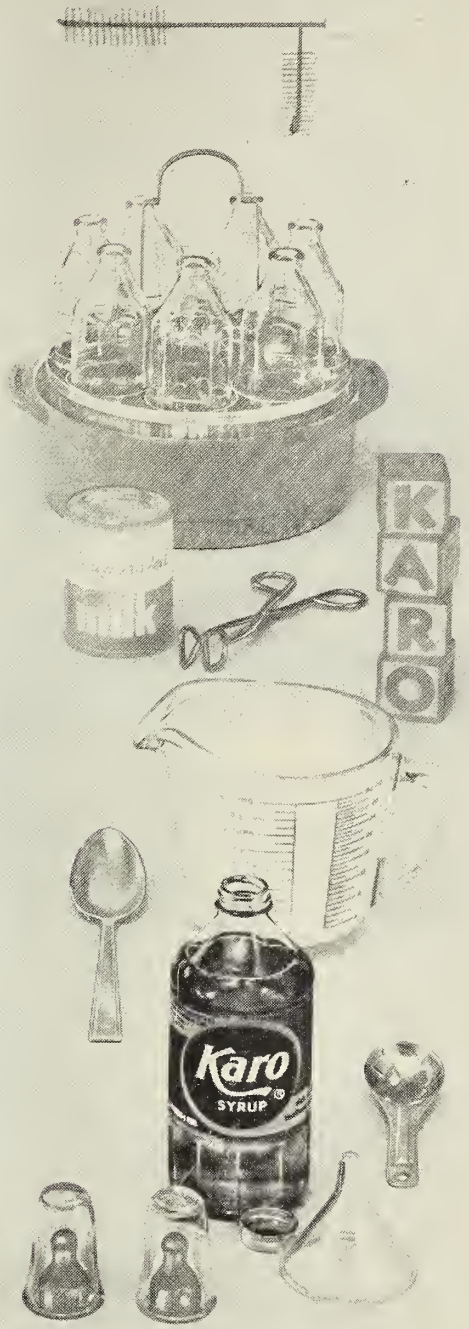
OPTIMUM caloric balance—60% of caloric intake, gradually achieved in easily assimilable carbohydrates—is assured with Karo. Milk alone provides 28%, or less than half the required carbohydrate intake.

A MISCIBLE liquid, Karo is quickly dissolved, easy to use, readily available and inexpensive.

A BALANCED mixture of dextrins, maltose and dextrose, Karo is well tolerated, easily digested, gradually absorbed at spaced intervals and completely utilized.

PRECLUDES fermentation and irritation. Produces no reactions, hypoallergenic. Bacteria-free Karo is safe for feeding prematures, newborns, and infants—well and sick

LIGHT and dark Karo are interchangeable in formulas; both yield 60 calories per tablespoon.



CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

'ANTEPAR'®*



for "This Wormy World"

PINWORMS

ROUNDWORMS

*SYRUP OF 'ANTEPAR' Citrate brand
Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand
Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.

BURROUGHS WELLCOME & CO. (U. S. A.) INC.
Tuckahoe, New York

request. That may not be the situation when appropriation bills come up next session. Secretary Folsom of the Department of Health, Education, and Welfare did not take office until Congress was about to adjourn last summer, but since then he has repeatedly gone on the record in favor of even greater U. S. expenditures for research. In October Mr. Folsom declared:

". . . Today we find new problems and new opportunities. We find that heart disease, and cancer and arthritis, are taking an increasing toll. And so today as a nation we are changing our lines of battle to fight this increase in chronic and major diseases. All the facts point to one great need. It is the need for more research—to learn how these chronic diseases are started, so they can be prevented; to learn to detect them in the early stages, so they can be cured. . . ."

Again in November, addressing a conference on antibiotics, Mr. Folsom struck the same key, only this time more firmly. After noting that the U. S. now is spending over 12 times more on medical research than it was spending in 1946, he declared: "We must seriously consider making even more funds available for medical research to bring even greater benefits to humanity."

NOTES

The Joint Congressional Committee on the Economic Report may have some health legislation to offer next year as a result of a study of the problems of the low-income family, including methods of paying hospital, physician and drug bills.

The medical and criminal problems connected with narcotic addiction have occupied the attention of two Congressional groups between sessions, subcommittees of the Senate Judiciary Committee and the House Ways and Means Committee. The latter is particularly worried over abuses it claims to have discovered in the use of barbiturates and amphetamines.

Dr. Frank B. Berry, assistant Defense Secretary for Health and Medical matters, in his annual report warns that the doctor procurement problem again may become acute, despite last summer's two-year extension of the act. He said the Department may not be able to obtain all the older physicians it needs because of the amendment barring the drafting of men over 35 if they have applied for a medical commission and been rejected on purely physical grounds. Also, Dr. Berry thinks the ratio of three physicians per 1,000 of troops may be too narrow a margin for safety.

Attend the Annual Meeting of the Iowa State Medical Society April 22-25, 1956.

POLIO AHEAD

Although the number of polio cases in Iowa in 1955 was less than half the average number of the previous five years, Iowa will still have polio problems in 1956. The Salk vaccine is a major weapon against paralytic poliomyelitis, but it has not yet won the war against this disease.

Continuing cooperation of physicians must be had both in administering the vaccine and in caring for patients already paralyzed and *who will be* paralyzed in spite of the vaccine. The Salk vaccine is not 100 per cent effective and it will take considerable time yet, perhaps years, before all individuals most susceptible to paralytic poliomyelitis can be fully immunized against it.

The National Foundation for Infantile Paralysis, supported solely through public contributions to its January March of Dimes, has made an enviable record, both in this state and nationwide, for meeting the problems posed by paralytic polio. In 1955 the March of Dimes gave 244,000 cc. of Salk vaccine without charge to the state of Iowa to initiate a statewide vaccination program.

The results already reported from the use of the vaccine are most encouraging but they must not be allowed to blind the eye of the medical profession to the road that still lies ahead. There remains a great need for additional research to improve the Salk vaccine, to determine the duration of immunity it effects (and conversely to determine the need for "booster shots") and to provide the best possible treatment for patients already or yet to be involved with paralytic poliomyelitis. There is also a vast need for the professional education of young men and women who will contribute to the necessary research and help give the needed treatment.

To pay for research, education and aid to polio patients, the March of Dimes needs $47,600,000 in 1956. Iowa physicians, knowing both the need and the record, will want to support and urge their patients to support the 1956 March of Dimes in their own communities.

A brief review of the record of the National Foundation for Infantile Paralysis in Iowa, where it has 100 local chapters, should help to orient physicians to the many services to patients and the professions which have been made possible by the March of Dimes since 1938, when the National Foundation was founded.

Almost $4,500,000 has been spent in Iowa by local chapters for the care of polio patients.

A total of 77 National Foundation scholarships and fellowships have been awarded to Iowa residents.

Research in virology and the treatment and after-care of poliomyelitis has been conducted at the State University of Iowa. Toward this research the March of Dimes has contributed over $80,000.

Emergency aid in dollars and in equipment for polio patients has been generously supplied. In the first 10 months of 1955 a total of $60,050 in emergency aid was sent to 17 Iowa chapters by the national headquarters of the National

Results With

'ANTEPAR'®*

against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

*SYRUP OF 'ANTEPAR' Citrate brand Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

*TABLETS OF 'ANTEPAR' Citrate brand Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.



BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, New York

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES

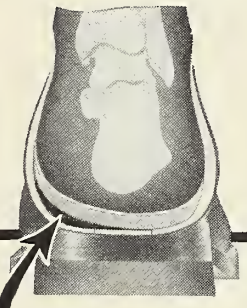
Starting Dates—Winter, 1956

SURGERY—Surgical Technic, Two Weeks, January 23, February 6
Surgical Anatomy & Clinical Surgery, Two Weeks, March 5
Surgery of Colon & Rectum, One Week, February 27, April 9
General Surgery, One Week, February 13, Two Weeks, April 23
Basic Principles in General Surgery, Two Weeks, April 9
Gallbladder Surgery, Ten Hours, April 9
Fractures & Traumatic Surgery, Two Weeks, March 12
GYNECOLOGY—Office & Operative Gynecology, Two Weeks, February 13, March 12
Vaginal Approach to Pelvic Surgery, One Week, February 6, March 5
OBSTETRICS—General & Surgical Obstetrics, Two Weeks, February 27, March 26
MEDICINE—Internal Medicine, Two Weeks, May 7
Electrocardiography & Heart Disease, Two Week Basic Course, March 12
Gastroscopy, Forty-Hour Basic Course, March 19
Dermatology, Two Weeks, May 7
RADIOLOGY—Diagnostic X-Ray, Two Weeks, February 6
Clinical Use of Radioactive Iodine, One Week, April 2
Clinical Uses of Radioisotopes, Two Weeks, May 7
PEDIATRICS—Intensive Review Course, Two Weeks, May 14
Neurological Diseases; Cerebral Palsy, Two Weeks, June 18
UROLOGY—Two-Week Course, April 16
Cystoscopy, Ten Days, by appointment.

Teaching Faculty—Attending Staff of Cook Co. Hospital

Address: Registrar, 707 South Wood St., Chicago 12, Ill.

Foot-so-Port Shoe Construction and its Relation to Weight Distribution



- Insole extension and wedge at inner corner of heel where support is most needed.
- Special Supreme rubber heels are longer than most anatomic heels and maintain the appearance of normal shoes.
- The patented arch support construction is guaranteed not to break down.
- Innersoles are guaranteed not to crack, curl, or collapse. Insulated by a special layer of Texon which also cushions firmly and uniformly.
- Foot-so-Port lasts were designed and the shoe construction engineered with orthopedic advice.
- NOW AVAILABLE! Men's conductive shoes. N.B.F.U. specifications. For surgeons and operating room personnel.
- By a special process, using plastic positive casts of feet, we make more custom shoes for polio, club feet and all types of abnormal feet than any other manufacturer.

Write for details or contact your local **FOOT-SO-PORT** *Shoe Agency. Refer to your Classified Directory*

Foot-so-Port Shoe Company, Oconomowoc, Wis.

Foundation. In the year 1954 the amount was over $124,000 to 29 chapters.

A total of 10 tank respirators, 15 chest respirators and 14 rocking beds were sent into Iowa as emergency shipments in the first 10 months of 1955. The previous year Iowa got 58 respirators and 16 rocking beds.

PERSONALS

At a symposium on "The Role of Some of the Newer Vitamins in Human Metabolism and Nutrition" conducted at Vanderbilt University, Nashville, on October 20, **Dr. William B. Bean**, head of the Department of Internal Medicine at SUI, spoke on "Pantothenic Acid Deficiency Induced in Human Adults." **Dr. Charles C. May**, head of the SUI Department of Pediatrics, was the discussant for one of the other papers read at the meeting, and attended a meeting of the scientific advisory board of the National Vitamin Foundation, of which he is a member.

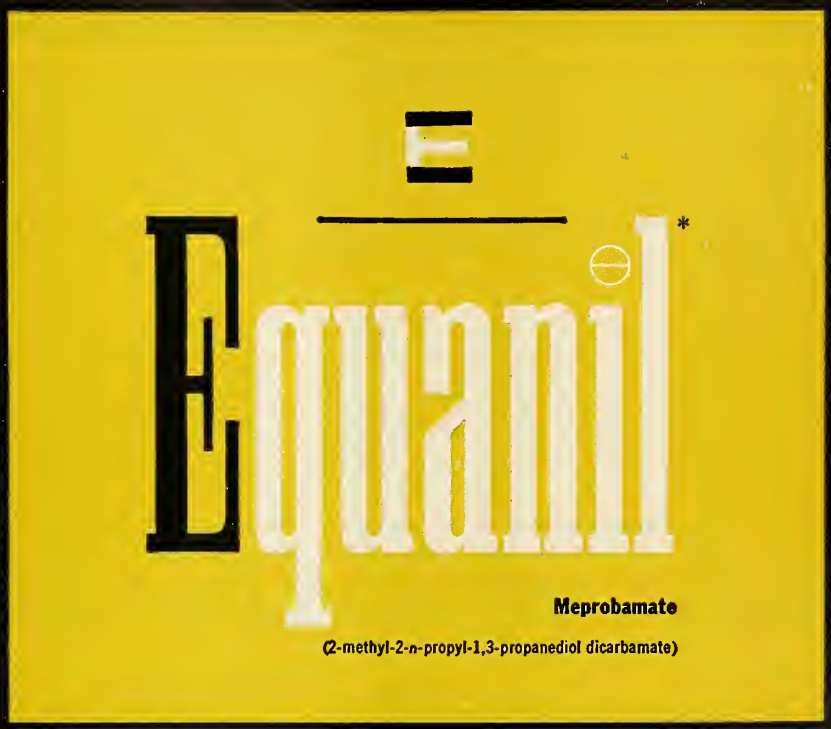
Dr. F. Neal Johnson, has closed his office on Army Post Road, Des Moines, preparatory to undertaking a residency in anesthesiology at SUI.

On October 14, the State Board of Regents appointed **Dr. F. A. D. Alexander** to be an associate in the Department of Surgery at SUI. He holds an M.D. degree from Queen's University, Kingston, Ontario, and has previously taught at the University of Wisconsin, Albany Medical College, New York University, and the Southwestern Medical School of the University of Texas.

At the annual meeting of the Alumni Club of the Department of Internal Medicine at SUI, on October 14 and 15, a symposium was conducted for the residents by **Dr. Christian Schrock**, of Iowa City, **Dr. Wm. Ames**, of St. Joseph, Missouri, **Dr. Wm. Swanson**, of Mason City, and **Dr. A. B. Hendricks**, of Davenport, on the pro's and con's of various types of practice. Then, scientific papers were presented by **Dr. R. F. Sheets** on "Deficit of Accelerator Globulin and Prothrombin in Man From Prolonged Excessive Feeding of Methionine," **Dr. I. M. Smith** on "Host Responses to Staphylococcal Diseases," **Dr. B. I. Lewis** on "Rauwolfia in Treatment of Coronary Artery Disease and the Anginal Snydrome," and **Dr. R. D. Eckhart** on "Significance of Diet in the Treatment of Infectious Hepatitis."

Other Iowa physicians in attendance were **Dr. Kenneth Kingsbury**, Ottumwa; **Dr. Richard Emmons**, Clinton; **Dr. Vera French**, Davenport; **Dr.**

for equanimity [1,2]...



new anti-anxiety factor
with muscle-relaxing properties
relieves tension

Wyeth®
Philadelphia, Pa.

Usual dosage: 1 tablet, t.i.d.

Supplied: Tablets, 400 mg., bottles of 48.

1. Selling, L.S.: J.A.M.A. 157:1594 (April 30) 1955.
2. Borrus, J.C.: J.A.M.A. 157:1596 (April 30) 1955.

*Trademark

Kenneth Hazlet, Dubuque; **Dr. Robert Miller,** Waterloo; and **Dr. Leslie Swanson,** Mason City.

Dr. Lewis E. January, professor of internal medicine at SUI, has been named to the board of directors of the American Heart Association for a three-year term. He was secretary of the Association in 1949, vice-president in 1950 and president in 1952.

More than 75 physicians from eight states attended a postgraduate course in obstetrics and gynecology on November 4 at Iowa City. Participants in the program were **Dr. Lloyd Miller,** Cedar Rapids; **Dr. G. W. Rowney,** Sioux City; **Dr. Madelene M. Donnelly,** Des Moines; **Dr. Robert Shaw,** Waverly; **Dr. C. J. Lund,** head of the Department of Obstetrics and Gynecology at the University of Rochester school of medicine; **Dr. E. J. DeCosta,** of Passavant Memorial Hospital, Chicago; and the following members of the SUI staff: **Drs. J. H. Randall, W. C. Keettel, W. B. Goddard, J. T. Bradbury** and **Ibrahim Mufarrij.**

Doctors Alson E. Braley and **Hermann M. Burian,** of SUI, have been named section editors for the SURVEY OF OPHTHALMOLOGY, a new bi-monthly journal which is to make its debut in February, 1956. Published by the Williams & Wilkins Co., of Baltimore, the issues will survey current ophthalmological literature and will feature critical appraisals of it by the section editors.

Dr. Irving J. Hanssmann returned to his practice in Council Bluffs on November 21 after spending several weeks in Chicago, where he took a postgraduate course at the Cook County Graduate School of Medicine.

Three faculty members from the SUI College of Medicine presented papers at the 28th annual meeting of the Central Society for Clinical Research, in Chicago on November 4 and 5. **Dr. W. B. Bean,** head of the Department of Internal Medicine, spoke again on pantothenic acid deficiency; **Dr. Sidney E. Ziffren** discussed "Collagenase, an Enzyme of the Pancreas"; and **Dr. George N. Bedell,** assistant professor of internal medicine, read a paper on "Plethysmographic Determination of the Volume of Gas Trapped in the Lungs of Patients With Pulmonary Disease."

Dr. Henry F. Dolan, who has served Anamosa for the past 34 years, has been named "Catholic Rural Physician of the Year" by the National Catholic Rural Life Conference. As evidence of that distinction, he was presented the Trainer Award at a banquet in Lexington, Kentucky, on

SAINT BERNARD'S HOSPITAL

Council Bluffs, Iowa

Established 1887 **Capacity 200 beds**

Under the Supervision of the Sisters of Mercy

An Institution for the Study and Treatment of Nervous and Mental Disorders.

Conditioned Reflex and Antabuse Therapy for Alcoholism

Affiliated With Creighton University

WILLIAM E. ASH, M.D., Medical Director
JAMES D. MAHONEY, M.D., Associate Director **RICHARD B. LEANDER, M.D.**



Parke, Davis & Co. photographed a group of central Iowa guests at the front doors of its main building recently. Pictured here, from left to right, are (front row) W. W. Hayne, M.D., Des Moines, J. A. Cortese, D.D.S., Des Moines, D. A. Glomset, M.D., Des Moines, W. A. Castles, M.D., Dallas Center, C. A. Nicoll, M.D., Panora, W. P. Gurske, Des Moines representative for Parke, Davis & Co., D. W. Blair, M.D., Des Moines, C.H. Johnston, M.D., Des Moines, (back row) R. A. Smith, M.D., Albia, W. J. Morrissey, M.D., Des Moines, L. F. Krick, Jr., D.D.S., Des Moines, G. W. Bennett, M.D., Oskaloosa, L. C. Hickerson, M.D., Brooklyn, T. A. Burcham, Jr., M.D., Des Moines, R. B. Stickler, M.D., Des Moines, H. E. Wichern, M.D., Des Moines, and C. A. Sones, M.D., Des Moines.

October 25. He is the first Iowa physician to have been so honored.

Dr. T. J. Greteman, of Dubuque, was reelected president of the Dubuque Archdiocesan Catholic Physicians' Guild on October 23, at Waterloo. Other officers of the organization are **Dr. Robert C. Locher,** Cedar Rapids, vice-president; and **Dr. A. J. Entringer,** Dubuque, secretary-treasurer.

Dr. Charles H. Morse, of Eagle Grove, a Life Member of the Iowa State Medical Society, underwent surgery at Mercy Hospital, Fort Dodge in mid-October. At last report, his condition was satisfactory.

At Roland on October 15, Miss Ruth Angeline Anderson became the bride of **Dr. Robert J. Reed,** who practices medicine in the Beaverdale district of Des Moines. Their wedding trip took them to the West Coast.

Dr. William F. Dean, of Osceola, a Life Member of the Iowa State Medical Society, has announced that henceforth he will be in his office only on Mondays and Fridays. His age is 95, he has been a physician for 61 years, and has served Osceola during more than 50 of them.

One of the most prized possessions of **Dr. John J. Tilton,** of Bellevue, is a dog, one of only about 20 vizslas in the United States. The animal's forebears, it is said, were "dognapped" for Hungary several months ago, and the pup himself is expected to become a super-dog both as regards guarding the doctor's property and pointing out and retrieving game birds.

Drs. H. R. Henstorf, G. H. Powers and **K. J. Gee,** of Shenandoah, have published a notice of incorporation of the Shenandoah Medical Center.

The American Society of Ophthalmologic and Otolaryngologic Allergy chose **Dr. Dean Lierle,** head of the Department of Otolaryngology at SUI, as its president, and **Dr. L. H. Prewitt,** of Ottumwa, as its vice-president during a convention it held in Chicago in October.

Following his separation from the Air Force Medical Corps in November, **Dr. Joseph C. Gottsch,** of Shenandoah, has accepted a residency in general surgery at the Veterans Administration Hospital at New Orleans.

Dr. John A. Sibley, a urologist who received his residency training at the Mayo Clinic, has joined the McFarland Clinic in Ames.

Members of the Park Hospital Clinic, in Mason City, have contributed $1,000 to Grinnell College as the start of a fund to assist deserving undergraduate students who intend studying medicine. The fund is in the name of **Dr. George M. Crabb,** late of Mason City, who was a trustee of the College from 1939 until his death, in 1953.

The will of the late Myrta Clark, of Stuart, includes a bequest of $5,000 to Iowa Methodist Hospital, Des Moines, for a room in honor of her husband, **Dr. H. F. Clark.**

A new public school building in Cedar Rapids is to be named for the late **Dr. Arthur W. Erskine,** a physician who became internationally famous as a pioneer in radiology. Mr. Edwin J. Burns, a fellow townsman and the illustrator of Dr. Erskine's

In a Filter Cigarette... it's the Filter You Depend on



The VICEROY filter tip contains 20,000 tiny filter traps, made through the solubilization of pure natural material. This is twice as many of these filter traps as any other brand.

We believe this simple fact is one of the principal reasons why so many doctors smoke *and* recommend VICEROY—the cigarette you can *really* depend on!



book PRACTICAL X-RAY TREATMENT, has done a portrait of the doctor that is to occupy a prominent place in the new building. It contains the insignia of the Iowa State Medical Society and the Radiological Society of North America, organizations of which he was at various times president, and includes reproductions of the distinguished service awards conferred upon him by the American Cancer Society. Dr. Erskine had also been head of the American College of Radiology and chairman of the AMA's section of radiology.

Dr. Grace M. Sawyer, superintendent of the Woodward State Hospital and School, has been quoted by a staff writer for the DES MOINES REGISTER as saying that of the 1,650 patients in her institution, 423 have some form of epilepsy, but that of that latter number no more than 34 have normal intelligence and an additional 27 can be described as "dull normal." "We don't get many higher grade epileptics any more," she told him, "and some of those who were here have gone out."

Dr. J. A. MacQueen, of SUI, told the same writer that epilepsy can now be completely controlled in about 80 per cent of the adults who are affected. He said that there are now about 3,600 epileptics in Iowa.

The Bremer County Board of Supervisors has voted $2,000 and the Waverly Community Chest has matched that sum to erase the deficit of the child guidance center at the Lutheran Children's Home. In the "Mental Illness" column of the JOURNAL this month, **Dr. W. A. Tice**, Waterloo psychiatrist, describes the work which that center has been doing.

Drs. R. K. Keech, David E. Beardsley, R. A. Vorpahl and **J. M. Knox** were honored at the meeting of the Linn County Medical Society on October 14, for having practiced medicine 50 years. Engraved desk sets were presented to them. The Society seconded Jones County's nomination of **Dr. Thomas Redmond,** of Monticello, a Life Member of the Iowa State Medical Society, to be General Practitioner of the Year.

Construction has begun on a $44,000 medical building in Waterloo for **Drs. Richard W. Driver, C. P. Addison, James R. Thomas, James H. Jeffries** and **Albert Dolan.** It is to be a 14-room structure, and it is hoped that it will be ready for occupancy on January 1.

On October 1, **Dr. Donald E. Tyler** associated himself with **Dr. Roger B. Drown** at the Physicians' Clinic in Fort Dodge. Dr. Tyler has been practicing in Fort Dodge for approximately a year, and Dr. Drown for about six.

Thirty Iowa physicians attended a postgraduate course in thyroid disease in Iowa City October 13 that was sponsored by the departments of internal medicine, surgery and radiology at SUI. Participants from the University included **Dr. Elmer L.**



Principal speakers at the Conference for County Society Presidents and Secretaries held at the Savery Hotel, Des Moines, on October 23, were (from left to right) Dr. David Allman, of Atlantic City, chairman of the AMA Legislative Committee; Dr. Lonnie A. Coffin, Farmington, president of the Iowa State Medical Society; Mr. James Bryan, Summit, New Jersey, public relations consultant and author of a recent book on med cal public relations; and Mr. C. Joseph Stettler, Chicago, head of the AMA Legal Department.

when patients complain of itching, scaling, burning scalps—or when you spot these symptoms of seborrheic dermatitis—you can be sure of quick, lasting control when you prescribe



SELSUN®

for your seborrheic dermatitis patients

controls 81-87% of all seborrheic dermatitis, 92-95% of all dandruff cases. Once scaling is controlled, SELSUN keeps the scalp healthy for one to four weeks with simple, pleasant treatments. In 4-fluid-ounce bottles, available on prescription only. Abbott

506127

® *SELSUN Sulfide Suspension / Selenium Sulfide, Abbott*



A number of northwest Iowa physicians and their wives visited the Eli Lilly & Co. laboratories in Indianapolis early in October. Picturer above, from left to right, are (top row) Dr. Ashton McCrary, Lake City, Dr. David Carver, Rockwell City, Dr. D. H. King, Spencer, Dr. John Gauger, Early, Dr. E. K. Vaubel, Estherville, Dr. Clyde Smith, Ringsted, Dr. Paul Brecher, Storm Lake, Dr. John Schutter, Algona, Dr. G. B. Johnston, Estherville, Mr. E. A. McHugh, Parke, Davis & Co. representative at Spencer, (middle row) Mrs. Carver, Dr. Richard Johnson, Denison, Dr. Charles Fee, Denison, Dr. Robert Huber, Charter Oak, Dr. Rudolph Ferlic, Carroll, Dr. Melvin Bourne, Algona, Mrs. Bourne, Mrs. Vaubel, Mrs. Johnston, (bottom row) Mrs. McCrary, Mrs. Johnson, Mrs. Fee, Mrs. Huber, Mrs. Ferlic, Mrs. Gauger, Mrs. King, Mrs. Brecher and Mrs. McHugh.

DeGowin, professor of internal medicine; **Dr. E. E. Mason,** assistant professor of surgery; **Dr. H. E. Hamilton,** associate professor of internal medicine; **Dr. H. B. Elkins,** associate professor of radiology; **Dr. Joseph A. Buckwalter,** assistant professor of surgery; and **Dr. Titus C. Evans,** head of the radiation research laboratory.

The speaker of the AMA House of Delegates has appointed the senior delegate from Iowa, **Dr. Donovan F. Ward,** of Dubuque, to the Reference Committee on Reports of Officers, for the interim session in Boston.

Dr. Arthur P. Wickstrum, a major in the Army Reserve and a resident at the V-A Hospital in Iowa City, commands the newly formed medical company of the 410th infantry regiment there.

Formation of the new company reflects two recent changes in the Army Reserve program. First, the Reserve is now building strength in consequence of a law passed in August. Second, the 103rd infantry division of the Army Reserve, of which the Iowa City companies are parts, has been declared a "combat ready" outfit, along with nine others in the country. There are now 20 men in the medical company of the 410th, and 10 more will be added shortly.

Dr. Charles W. Ellyson, who has practiced at Waterloo for 39 years, and **Dr. J. R. Thompson,** who has practiced 45 years there, were given letters from the officers of the Iowa State Medical Society admitting them to membership in the 50-Year Club, at a meeting of the Black Hawk County Medical Society on October 18. Other Waterloo members are **Drs. J. E. Ridenour, Edwin Shannon** and **Frank Hartman.**

Dr. C. L. Heald, of Sigourney, and **Dr. Henry G. Langworthy,** of Dubuque, both Life Members of the Iowa State Medical Society, were among 77 physicians from all parts of the United States and Canada who received a special attendance award at the 40th meeting of the Interstate Postgraduate Medical Association in Milwaukee, November 14-17. It recognizes attendance at ten or more of the organization's meetings since 1940.

Dr. James Dunn, of Davenport, a Life Member of the Iowa State Medical Society, was presented an honorary life membership in the Iowa-Illinois Central District Medical Association, in Moline on November 16. For many years he was secretary of the group.

Dr. Louis R. Greco, Jr., whom last month's JOURNAL mentioned as having opened a practice in Boone, was one of 950 surgeons inducted as new fellows of the American College of Surgeons in Chicago early in November.

Dr. Walter Cary, of Dubuque, has announced his intention of moving to California.

At the meeting of the Iowa Health Council held in Des Moines on November 10, **Dr. H. C. Merillat,** Des Moines psychiatrist, declared that public care for Iowa's mental patients "has decidedly

BLOOD DIAGNOSTIC REAGENTS

30-102—Blood Grouping Serum (Set Anti-A and Anti-B), 2 cc. of each.....Set $2.00
30-105—Blood Grouping Serum (Set Anti-A and Anti-B), 5 cc. of each.....Set 4.50
35-605—Anti-A, B (Group O) Blood Grouping Serum, 5 cc. .....Each 2.50
32-102—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 2 cc.....Each 3.25
32-105—Anti-RHo. (Anti-D) Typing Serum, (Slide or Rapid Tube Test), 5 cc.....Each 7.50

SOLUTIONS IN VIALS

50-100—Physiological Salt Solution, 100 cc. .....Case of 100 35.00
51-100—Distilled Water (Water for Injection U.S.P.), 100 cc. .....Case of 100 35.00
55-050—Dextrose Injection 50%, 50 cc....Case of 100 30.00

SEILER SURGICAL CO.
111 So. 17th St. Omaha, Nebr.



Skill and Care!

Are combined with materials of highest quality in all Palm orthopedic appliances.

abdominal and arch supporters
specialists in braces for deformities
sacro iliac belts
elastic stockings expert truss fitters
crutches for sale or rent

Palm Orthopedic Appliance Company
223 Locust Street Telephone 2-6766
Des Moines 9, Iowa

The Neurological Hospital
2625 West Paseo
Kansas City, Missouri

★ ★ ★

A voluntary hospital providing the care and treatment of nervous and mental patients and associate conditions.

SECLUSION MATERNITY



FAIRMOUNT HOSPITAL

For *unmarried girls*
Est. 1909

Private sanitarium with certified obstetrician in charge. All adoptions arranged through juvenile court. Early entrance advised.
Rates reasonable. In certain cases work given to reduce expenses.

Write for information
MRS. EVA THOMSON
4911 East 27th St.
Kansas City, Mo.

deteriorated in the last ten years." In its care of the mentally ill, he continued, "Iowa is going back to 1875 when county homes took care of mental patients. The state is now paying counties a 'bonus' to care for them in those non-medical institutions. The state has no follow-up program of additional help for the patient who has been released from mental health institutes except help by mail." As regards the status of the private practice of psychiatry in Iowa, Dr. Merillat believes that there had been decided improvement during the past ten years. "There has been a marked increase in the number of practicing psychiatrists, and we now have a fairly good coverage," he said.

In the future, inevitably and, he seemed to suggest, desirably, he predicted that state hospitals will be places for the custodial care of chronic and incurable mental patients. "Treatment," he foresaw, "will be centered in private psychiatric hospitals and in psychiatric wings of general hospitals."

Dr. John Conner, of Nevada, has succeeded Mrs. C. C. Inman, of the Iowa Farm Bureau Federation, as president of the Iowa Health Council.

Dr. Vernon Blaha, a Marshalltown physician who is in charge of the Navy hospital at Argentia Bay, Newfoundland, has been promoted to the rank of commander. He has been at his present post since June.

Speaking to prospective medical students at the seventh SUI pre-medical conference, in Iowa City on November 11, **Dr. R. G. Bunge**, professor of urology, warned the embryo-scientists against failing to distinguish between fact and conclusion. Rather than saying, "Ted is a bore," one is better advised to report the observable facts, that Ted always talks of his own exploits, fails to note what other people are saying or doing, and frequently interrupts other people's conversation. "It appears to me," he concluded, "that all of us would profit from a critical examination of language—the tool of knowledge, thinking, communication, cooperation, evaluation and survival."

Dr. L. B. Amick, of Sac City, who had been a patient at the Loring Hospital there, then at a Des Moines hospital, and then again at Loring, was taken to Rochester, Minnesota, on October 28.

Dr. Herbert Kersten, of Fort Dodge, read a paper on "Management of Certain Problems in Intestinal Obstruction" at a meeting of the Iowa Academy of Surgery that was held at Ames early in November.

Dr. E. J. Ahmann, who has been associated with **Dr. L. V. Schroeder** at Walcott for the past seven years, has moved his practice to Davenport.

The American College of Surgeons elected **Dr. D. M. Lierle,** head of the Department of Otolaryngology at SUI, to the membership of its Board of Regents, during its annual meeting in Chicago.

On December 1, **Dr. Karl Catlin** will replace **Dr. Norman D. Render** as superintendent of the Clarinda Mental Institute. Dr. Render is moving to a similar institution at Norfolk, Nebraska, where he will be burdened with no administrative duties, and can concentrate on practicing psychiatry. Dr. Catlin has been at Clarinda since 1948, and for some time has been assistant to the superintendent.

Dr. Martin I. Olsen, of Des Moines, president of Blue Shield, underwent eye surgery at Worrell Hospital in Rochester, Minnesota, in mid-November. At last report, he was recovering satisfactorily.

Dr. Everett M. George, scientific editor of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY and a Des Moines orthopedic surgeon, will begin a five-year term on January 1 as member of the Advisory Committee of the State Journal Advertising Bureau of the AMA. The SJAB is a cooperative that secures national ads for publications such as this one.

The AMA ARCHIVES OF INTERNAL MEDICINE has named **Dr. W. B. Bean** to edit its books section. The announcement of his appointment included a reference to the SUI department head's "unusual flair for the writing of pungent and elegant prose." Dr. Bean also is a member of the publication's editorial board.

Dr. Joel D. Teigland, of Des Moines, received word on October 24 that he had been certified in allergy, a sub-specialty accreditation of the Board of Internal Medicine.

One of the associate examiners for the American Board of Ophthalmology in Chicago in October was **Dr. Elmer Vorisek,** of Des Moines.

Dr. Edmund G. Zimmerer, Iowa State Health Commissioner, addressed the Public Health Cancer Association of America, in November, on the development of his state's program. The group held its meeting at Kansas City in conjunction with the sessions of the American Public Health Association.

Dr. F. C. Coleman, Des Moines, was reelected to the Board of Governors of the College of American Pathologists during the recent meeting of that organization in Chicago.

50 and eight years

Treating Alcohol and Drug Addiction



RALPH CLINIC

Formerly The Ralph Sanitarium

A Department of the Benjamin Burraughs Ralph Foundation for Medical Research

Ralph Emerson Duncan, M.D., Medical Director.

529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI

Telephone Victor 3624

THE
MEDICAL PROTECTIVE
COMPANY
FORT WAYNE, INDIANA

the doctor's most secure source of security

PROFESSIONAL PROTECTION
EXCLUSIVELY
SINCE 1899

DES MOINES Office:
O. W. Parker, Rep.
4003 11th Street Place
Telephone 3-3804
Bert Davis, Rep.
Apt. 46B, Wakonda Village
Tel. 8-5540

THE NORBURY SANATORIUM

Established 1901—Incorporated
Licensed—Jacksonville, Illinois

FRANK GARM NORBURY, A.M., M.D.,
Medical Director
HENRY A. DOLLEAR, M.D.,
Superintendent
FRANK B. NORBURY, M.D.,
Associate Physician

Operating

Maplecrest—

Restful, congenial homelike surroundings are combined with the most modern diagnostic and therapeutic equipment.

Maplewood—

Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

HILLCREST HOSPITAL

Operated by The Retreat Company

Des Moines 12, Iowa

Established 1905 **Cottage Plan**

A hospital for the study, care and treatment of mental, emotional, personality and habit disorders

Facilities available for Acute Psychiatric Conditions Geriatrics and Alcoholism

HERBERT C. MERILLAT, M.D., Medical Director
S. U. WYKOFF, M.D., Associate Psychiatrist
ADA DUNNER, M.D., Psychiatrist
PAUL T. CASH, M.D., Psychiatrist
SIDNEY L. SANDS, M.D., Psychiatrist
HOWARD V. TURNER, M.D., Psychiatrist
MARTIN J. KRAKAUER, Psychologist

SYDNEY L. MACMULLEN, President **HERBERT W. VETTER, Administrator**

2801 Woodland Ave. **Phone 5-2121**

DEATHS

Dr. Ernest John Liechty, 76, of Kingsley, died on October 28 at Iowa City, of cancer. He had been hospitalized for about three months.

Dr. William Maris, 65, who had practiced at Sioux Center for almost 39 years, died of uremic poisoning on October 29 at his home there. He had been ill for no more than a week.

Dr. Edward D. Beatty, 84, of Mallard, a Life Member of the Iowa State Medical Society, died at Rochester, Minnesota, on October 19. He retired from practice about seven years ago.

Dr. Edward DeWalt Allen, 65, who practiced at Hampton until about two and a half years ago, died on October 22 at Lutheran Hospital there.

Dr. Frank Leroy Vander Veer, 86, a Life Member of the Iowa State Medical Society who practiced for many years at Cedar Falls and Reinbeck, died on October 13 at his home in Janesville. He had been in semi-retirement since 1948.

SUI MEDICAL RESEARCH CENTER

Excavation work for the new $1,500,000 medical research center at SUI is nearing completion, and much of the foundation phase of the project is already under way. Dean Norman B. Nelson says that completion of the building is scheduled for November, 1956.

Designed in the shape of a "T," the structure will connect the General Hospital and the Medical Laboratories buildings with the cross-bar of the "T." The 1953 state legislature appropriated $900,000 of the money that it will cost, the federal government is paying $435,743, and the Rockefeller Foundation and the National Fund for Medical Education are contributing $149,000.

Dean Nelson says that the new building will enable him to move research projects out of areas that are needed for the treating of patients and for bedside teaching of medical students. But the research work will profit too, for the space that many such projects have occupied has been cramped, and some haven't been started for lack of room. In addition, improved teaching facilities will be available for the Department of Biochemistry, which will occupy the wing that forms the stem of the "T" design. Since 1953, when the Chemistry Building burned, the Department of Biochemistry has occupied another department's space in the Medical Laboratories Building.

"Also of special significance," the Dean says, "is the fact that the building is being designed on the module plan with movable partitions between rooms, and with completely flexible mechanical systems. This means that the building can be adapted 25 or 50 years from now to necessary changes, and that it will not become outmoded."

CIRRHOSIS IN CHILDREN

Cirrhosis of the liver, a condition commonly associated with alcoholism in adults, occurs more frequently in children than is generally thought, according to three Boston physicians, Drs. J. M. Craig, S. S. Gellis and David YiYung Hsia, of Harvard. Their report appeared in the September issue of the AMA's AMERICAN JOURNAL OF DISEASES OF CHILDREN.

Cirrhosis in American children usually is a result of hepatitis or of malformation of the liver and its parts which exists at birth. The physicians reported 98 cases seen at Children's Medical Center, Boston, between 1924 and 1953, of which 61 had been caused by obstructions and deformities, and 30 had been associated with hepatitis. Seven had resulted from miscellaneous causes, including heart, blood and bile duct disorders.

The frequency of cirrhosis associated with hepatitis is "surprising and important," the doctors declared. They emphasized the need for recognizing mild cases of hepatitis without jaundice and for following up known cases after signs and symptoms have disappeared.

Coming Meetings

(Continued from page 626)

Jan. 28-31	**Instructional Courses in Orthopedic Surgery.** Palmer House, Chicago
Jan. 30-Feb. 1	**Emergency Surgery for General Physicians.** U. of Minn. Center for Continuation Study, Minneapolis
Jan. 30 Feb. 3	**Dynamics of Endocrine Disease.** Institute for Metabolic Research, Highland Alameda County Hospital, Oakland
Jan. 30-Feb. 8	**Medical Care of Atomic Casualties.** Walter Reed Army Medical Center, Washington, D. C.
Jan. 30-Feb. 10	**Diagnosis and Treatment of Fractures and Dislocations.** New York University, NYC
Jan. 30-Feb. 10	**Cardiovascular Diseases.** Mt. Sinai Hospital, NYC
Jan. 30-Feb. 10	**Endaural Surgery.** New York University, NYC
Mar. 25-31	**Pan-American Med. Assn.** Interamerican Congress, Mexico City

THE KEELEY INSTITUTE
DWIGHT, ILLINOIS
Treating alcoholism and other problems of addiction.
REGISTERED BY THE AMERICAN MEDICAL ASSOCIATION—
MEMBER AMERICAN HOSPITAL ASSOCIATION.

ROSTER OF IOWA PHYSICIANS IN MILITARY SERVICE

As of November 10, 1955

Bateman, R. D., Iowa City
(Keesler Field, Mississippi) .....Capt., U.S.A.F.
Berard, Wm. P., Iowa City
(FPO, San Francisco) .....Lt., U.S.N.R.
Berg, J. W., Ames.....
Berggreen, Raymond G., Mason City
(U.S. Naval Hosp., Memphis, Tenn.) ..Lt., U.S.N.R.
Berndt, Allen E., Cedar Rapids
(Montgomery, Alabama) .....Maj., U.S.A.F.
Blaha, Vernon B., Marshalltown
(U.S. Naval Hospital, Argentia Bay, Newfoundland)
.....Commander, USNR
Bogle, W. C., Marion
(Minneapolis, Minnesota) .....Lt., U.S.N.R.
Cloud, A. B., Guthrie Center
(San Antonio, Texas) .....A.U.S.
Conoan, Eduardo A., Dow City
(Marine Corps Recruit Depot, San Diego,
Calif.) .....Lt.(j.g.), U.S.N.R.
Cooper, T. J., Iowa City
(Orlando, Florida) .....Capt., U.S.A.F.
Davidson, M. C., Emmetsburg
(El Paso, Tex.) .....Col., A.U.S.
Day, R. T., Hampton
(Randolph Air Force Base, Texas) .....U.S.A.F.
Devine, J. S., Whittemore
(San Diego, California) .....U.S.N.
Dieckman, M. R., Grundy Center
(Great Lakes, Illinois) .....Lt. (j.g.) U.S.N.R.
Eckberg, R. A., Hubbard
(Laredo AFB, Texas) .....Capt., USAF
Ehmke, Bruce C., Iowa City
(Brooke Army Med. Ctr., Ft. Sam Houston,
Texas) .....Capt., A.U.S.
Frys, Russell N., Iowa City
(Ft. Clayton, Canal Zone) .....Capt., A.U.S.
Geist, James H., Iowa City .....
Gleeson, J. J., Vail
(Gt. Lakes Nav. Tr. Sta., Illinois) .....U.S.N.
Hach, Felix, Ankeny
(Ft. Sam Houston, Texas) .....Capt., A.U.S.
Haskell, J. G., Reinbeck
(U.S.A.H., Ft. Riley, Kansas) .....
Hastings, R. A., Ottumwa
(U.S. Naval Hosp., Pensacola, Florida) .. Lt., U.S.N.
Heffron, John F., Anamosa
(Ellsworth AFB, Rapid City, S. D.) 1st. Lt., U.S.A.F.

GYNECOLOGIC CYTOLOGY SERVICE

INTERPRETATION OF CERVICO-VAGINAL, ETC.
(PAPANICOLAOU) SMEARS
FOR THE
DIAGNOSIS OF CARCINOMA

KITS (SLIDES, SPATULAS, FIXATIVE
AND MAILING CONTAINERS)
AND
INSTRUCTIONS FOR TAKING AND MAILING
SMEARS
FURNISHED ON REQUEST

M. WM. RUBENSTEIN, M.D.
GYNE-CYTOLOGY LABORATORY
104 S. MICHIGAN AVE. CHICAGO 3, ILL.

Hodges, R. E., Iowa City
(Silver Spring, Maryland) .....Capt., A.U.S.
Hogenson, G. B., Eagle Grove
(Navy Center, Omaha, Nebr.) .....U.S.N.
Howe, G. W., Iowa City
Grosse Isle, Michigan) .....N.A.S.
Johnson, W. A., Emmetsburg
(Corona, California) .....Lt., U.S.N.R.
Keil, P. G., Des Moines
(Maxwell AFB, Alabama) .....Lt. Col., U.S.A.F.
Koptik, George, Jr., Garwin
(Camp Lucas, Sault Ste. Marie, Mich.) .....
Kruse, R. H., Conrad
(Pearl Harbor, T. H.) .....Lt., U.S.N.R.
Larson, Gerald E., Elk Horn
(A.P.O. 856, New York, N. Y.) .....Capt., U.S.A.F.
Lawler, Matthew P., Des Moines
(Corona, California) .....U.S.N.
Lyman, Frank L., Jr., Fort Madison
(U.S. Naval Hosp., Beaufort, S. C.) ....Lt., U.S.N.R.
McCoy, John T., Cedar Falls
(U.S. Naval Hosp., Philadelphia, Penn.) Lt., U.S.N.R.
McFadden, F. Ross, Davenport
(Corpus Christi, Texas) ....Lt. Commander, U.S.N.
Marme, George W., DeWitt .....U.S.A.F.
Meyer, Paul G., Manchester
(APO, New York) .....Capt., A.U.S.
Montgomery, A. E., Jefferson
(Phoenixville, Pa.) .....Lt. Col., A.U.S.
Olsen, Max, Minden
(Great Lakes Naval Training Sta., Ill.) .....
Olson, Stewart O., Des Moines
(Seattle, Washington) .....Lt., USN
Pfeiffer, D. W., McGregor
(Ft. Sam Houston, Texas) .....A.U.S.
Powers, George H., Shenandoah
(FPO San Francisco, Calif.) .....Lt., U.S.N.R.
Rodgers, G. H., Mt. Ayr
(Brooke Army Hosp., Ft. Sam Houston, Texas)
.....Lt. A.U.S.
Rogers, Edward A., Anamosa (U.S.P.H.S. Hospital,
Seattle) .....
Sacco, Severino O., Iowa City
(Ft. Sam Houston, Texas) .....
Saunders. R. J.. Colfax
(Detroit, Michigan) .....1st. Lt., U.S.A.F.
Sear, John, Alden
(Brooke Army Med. Ctr., Ft. Sam Houston,
Tex.) .....A.U.S.
Sears, Richard H., Iowa City
(Washington, D. C.) .....Lt., USNR
Severson, Wayne L., Slater
(Montgomery, Alabama) .....U.S.A.F.
Sinton, D. W., Iowa City
(Denver, Colorado) .....A.U.S.
Smith, C. B., Iowa City
(San Antonio, Texas) .....Capt., A.U.S.
Swanson, Eric M., Iowa City
(Omaha, Nebraska) .....
Thompson, J. W., Ames
(Camp Breckinridge, Kentucky) .... Capt., A.U.S.
Trosman, Harry, Iowa City
(Camp Pendleton, California) .....U.S.N.R.
Turner, R. M., Armstrong
(11th Field Hosp., APO 178, New York City)
.....Capt., A.U.S.
Wilson, Robert G., Missouri Valley
(Clovis AFB, New Mexico) .....1st. Lt., USAF
Winter, F. D., Burlington
(Elmendorf A.F.B., Anchorage, Alaska) ...U.S.A.F.
Workman, R. D., Ruthven (Deep Sea Divers, Naval
Gun Factory, Washington, D.C.) .....Lt., U.S.N.

SPEAKERS' BUREAU SCHEDULES

RADIO

WOI—Ames, Iowa
Thursday at 11:15 a.m.

"Medicine Fights the Killers"

December 1 ..... Coronary Thrombosis
December 8 ..... Rheumatic Fever
December 15 ..... Cancer in Older Persons
December 22 ..... Leukemia
December 29 ..... Hypertension

WSUI—Iowa City, Iowa
Tuesday at 11:45 a.m.

"Medicine, U. S. A."

December 6 ..... Time to Think
December 13 ..... Looking Forward
December 20 .....Love to Live
December 27 ..... Lucky Day

TELEVISION

WOI-TV—Ames, Iowa
Thursday at 9:30 p.m.

"Medical Diary"

December 1 ..... Cerebral Palsy
December 8 .. Trends in Psychiatric Treatment
December 15 ..... Sleep
December 22 ..... Teen-Age Medical Problems
December 29 .... Boy-Girl Relationships—Part I

KGLO-TV—Mason City, Iowa
Sunday at 5:00 p.m.

"Medical Diary"

December 4 ..... Needy Patients—Part I
December 11 ..... Needy Patients—Part II
December 18 ..... Diabetes
December 25 ..... Deafness

KCRG-TV—Cedar Rapids, Iowa
Saturday at 5:30 p.m.

"Medical Diary"

December 3 ..... Auto Accidents
December 10 ..... The Senior Medical Student
December 17 ..... Needy Patients—Part I
December 24 ..... Needy Patients—Part II
December 31 ..... Diabetes

KTIV-TV—Sioux City, Iowa
Saturday at 5:30 p.m.

"Medical Diary"

December 3 ..... Glaucoma
December 10 ..... Auto Accidents
December 17 ..... The Senior Medical Student
December 24 ..... Needy Patients—Part I
December 31 ..... Needy Patients—Part II

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

Clinical samples sent to physicians upon request.

Davies, Rose & Co., Ltd.
Boston, 18, Mass.



MARY POGUE SCHOOL, Inc.

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D.
Medical Director

Barclay J. MacGregor
Registrar

22 Geneva Road, Wheaton, Ill. (near Chicago)



St. Joseph Sanitarium

Supervision Sisters of Mercy

P. O. Box 236
DUBUQUE, IOWA
or phone 3-8291 for information

Mild Mental and Nervous Cases
also
Convalescent and Rest Patients
Shock Therapy Hydrotherapy
Occupational Therapy
COMPETENT STAFF

PHYSICIANS' DIRECTORY

SURGERY

JULIAN M. BRUNER, M.D.

PRACTICE LIMITED TO
PLASTIC SURGERY AND SURGERY OF THE HAND

DES MOINES, IOWA
1005 BANKERS TRUST BUILDING PHONE 4-4835

ORTHOPEDICS

EVERETT M. GEORGE, M.D.

PRACTICE LIMITED TO
ORTHOPEDIC SURGERY

DES MOINES, IOWA
1010 EQUITABLE BUILDING PHONE 3-2828

VERL A. RUTH, M.D.

PRACTICE LIMITED TO
FRACTURES

913 BANKERS TRUST BUILDING
DES MOINES, IOWA

BRONCHOSCOPY AND ESOPHAGOSCOPY

JAMES A. DOWNING, M.D.
ROBERT R. UPDEGRAFF, M.D.
HAROLD J. McCOY, M.D.

614 BANKERS TRUST BLDG. DES MOINES, IOWA

BYRON M. MERKEL, M.D.
CHESTER C. WOODBURN, JR., M.D.

DES MOINES, IOWA
501 EQUITABLE BUILDING PHONE 4-3179

NEUROSURGERY

WALTER D. ABBOTT, M.D.
JOHN T. BAKODY, M.D.

PRACTICE LIMITED TO
NEUROSURGERY

DES MOINES, IOWA
900 DES MOINES BUILDING PHONE 3-5156

THE JOURNAL

of the

Iowa State Medical Society

INDEX

Volume XLV · Numbers 1-12

1955

A

Abruptio Placentae, Experience With, E. S. Taylor, M.D., and H. M. Haugen, M.D. 600
Acute Disseminated Histoplasmosis: Report of Case in an Adult, Clement A. Sones, M.D., *et al.* 463
Acute Hemolytic Anemia in Infectious Mononucleosis, L. J. Kirkham, M.D. 525
Adolescents, Treatment of, J. R. Gallagher, M.D. 505
Adolescents, What Do We Expect of Them, H. H. Comly, M.D. 333
After Myocardial Infarction, What? R. D. Pruitt, M.D. 219
Agammaglobulinemia, A. K. Chappell, M.D. 132
Agammaglobulinemia May Facilitate Tissue Transplants (Editorial) 218
Alcoholism, Chronic, R. C. Larimer, M.D. 415
Allergists Hold Annual Meeting 218
American Fracture Association (Among ads in September issue)
AMA Booklet on Industrial Medicine (Among ads in November issue)
AMA Committee Reports on Causes of Fee Splitting.. 271
AMA House of Delegates (Editorial) 431
AMA Public Relations Institute 444
AMA School Health Conference 545
AMA Surveys County Medical Societies 327
AMEF Gives Awards of Merit 332
American Goiter Association 156
Anderson, Edward E., M.D., Role of Vitreous Humor in Various Eye Diseases 567
Anesthesia, Fundamental Errors in, S. C. Cullen, M.D., 421
Anesthesiology Exhibit 259
Ano-Rectal Tumors, the Problem of, H. F. Trafton, M.D. 328
Antimicrobial Therapy of Tuberculosis, Statement of Committee on Therapy of American Trudeau Society 614
Antrum and Present Day Gastric Surgery, H. H. McCarthy, M.D., and C. M. Wilhelmj, M.D. 451
April Is Cancer Month (Editorial) 199
Ascites, Intractable, Medical Aspects of, Paul From, M.D. 279
Au^{198} Effective in Prostatic Cancer 444

B

Barometric Pressure and Health (Editorial) 297
Better Education in Medical Ethics 351
Blackstone, Martin A., M.D., Carcinoma of Thyroid Gland 73
Blizzard, Robert M., M.D., Chronic Serous Meningitis: Two Case Reports and Review of Literature 127
Blue Cross-Blue Shield 50, 88, 160, 206, 256, 299, 347, 450, 494, 584, 644 and among ads in October issue
Bonfiglio, Michael, M.D., Slipped Capital Femoral Ephiphysis 189
Booklet on Premature Babies (Among ads in June issue)
Boy Scout Fund Raising 491
Bozek, T. T., M.D., (co-author), Medical Treatment of Hypertension for General Practitioner 224
Brain Tumor, a Case of, SUI Clinical Pathologic Conference 285
Braley, Alson E., M.D. (co-author), Cross-Eyed Child . 185
Braley, Alson E., M.D. (co-author), Statistics on 100 Cases of Retinal Detachment Surgery 473
Brintnall, E.S., M.D. (co-author), Resection of Terminal Aorta and Replacement With Aortic Homograft 272
Brown, Carroll A., M.D. (co-author) Treatment of Intractable Pain 4
Burian, H. M., M.D. (co-author), Cross-Eyed Child 185
Buttonhole Your Senator! (Editorial) 533

C

California Court Upholds Co-op (Among ads in February issue)
Carcinoma of Lung, F. H. Squire, M.D. 409
Carcinoma of Thyroid Gland, M. A. Blackstone, M.D. .. 73
Cardiology 265
Cardiovascular and Pulmonary Diseases (Among ads in November issue)
Care for Aged (Editorial) 578
Case of Brain Tumor, SUI Clinical Pathologic Conference 285
Case of Chondrosarcoma, SUI Clinical Pathologic Conference 22
Case of Chronic Uremia Secondary to Nephrosclerosis, Mercy (Des M.) CPC 477
Case of Endocardial Fibro-elastosis of Heart, SUI Clinical Pathologic Conference 620
Case of Lupus Erythematosus, SUI Clinical Pathologic Conference 144
Case of Multiple Sclerosis, SUI Clinical Pathologic Conference 78
Case of Proteus Septicemia, SUI Clinical Pathologic Conference 241
Case of Urokon Death, SUI Clinical Pathologic Conference 570
Caughlan, Gerald V., M.D., President's Address 317
Causes and Prevention of Postpartum Hemorrhage, A. W. Diddle, M.D. 58
Change in Medical School Rules Advocated 11
Changed Procedure in V-D Control (Editorial) 86
Chappell, Allan K., M.D., Agammaglobulinemia 132
Chlorophyll Not Altogether Discredited (Among ads in September issue)
Cholangiography in Surgery of Biliary Tract, J. A. Gius, M.D., and C. J. Johnson, M.D. 513
Cholelithiasis, Silent, O. C. Hardwig, M.D. 508
Chondrosarcoma, Case of, SUI Clinical Pathologic Conference 22
Chronic Alcoholism, R. C. Larimer, M.D. 415
Chronic Serous Meningitis: Two Case Reports and Review of Literature, R. M. Blizzard, M.D. 127
Chronic Ulcerative Colitis: Current Therapeutic Considerations, J. B. Kirsner, M.D. 119
Chyle Peritonitis, Report of a Case, J. Trotzig, M.D..... 232
Ciba Plans Medical T-V Series (Among ads in September issue)
Ciba Starts Medical Newspaper (Among ads in October issue)
Cirrhosis in Children (Among ads in December issue)
Civil Defense Conference 596
Civilian Care for Army Personnel 253
Clinical Chemistry for Physicians 490
Clinical Pathologic Conference, SUI, ...22, 78, 144, 194, 241, 285, 570, 620
Clinical Problems of Acute Poliomyelitis, J. C. MacQueen, M.D., and J. C. Mulier, M.D. 267
Clinicopathologic Conference, Mercy Hospital, Des Moines 477
Coffin, Lonnie A., M.D., President-Elect's Address 319
Colorado U. Starts Practical Course 216
Colles' Fracture, Present Day Management of, L. T. Ford, Jr., M.D., and J. A. Key, M.D. 324
Combination of Work and Vacation (Among ads in June issue)

Coming Meetings 118, 184, 262, 315, 340, 428, 484, 531, 576, 626
Comly, Hunter H., M.D., What Do We Expect of Adolescents? 333
Committee on Therapy, American Trudeau Society, Antimicrobial Therapy of Tuberculosis 614
Community Health Week, March 21-27 93
Conference on Juvenile Problems 524
Conference on Tuberculosis 497
Congenital Anomalies of the Testes, E. M. Honke, M.D., and L. E. Pierson, M.D. 519
Continuation Course in Neurology 643
Coordinating Postgraduate Education (Editorial) 153
Cost Accounting in an Iowa Hospital (Editorial) 155
Coulson, Forrest H., M.D., Some Problems in Treatment of Hepatitis 564
County Medical Society Officers 108, 358, 552
County Society Meetings 57, 106, 169, 217, 266, 316, 357, 434, 542, 596, 652
Course on Fractures for GP's (Among ads in October issue)
Cross-eyed Child, A. E. Braley, M.D., and H. M. Burian, M.D. 185
Cullen, Stuart C., M.D., Fundamental Errors in Anesthesia 421
Cults (Among ads in October issue)
Current Therapy of Essential Hypertension, I. J. Hanssmann, M.D. 606

D

Danger in Candy-Flavored Medicines 339
Death Risks in Medical Partnerships 336
Deaths 58, 218, 266, 316, 357, 434, 542, and among ads in the February, March, September, November and December issues
Deaths Still Decreasing (Among ads in Nevember issue)
Decrease in T-B Hospitalization (Among ads in November issue)
Dedication (of University issue) 172
Definition to End All Definitions (Editorial) 486
Diabetes Mellitus, Recent Developments in, R. V. McKay, M.D. 560
Diabetic Patients (Young), Mortality Study of, D. W. Ortmeyer, M.D., and R. L. Jackson, M.D. 137
Diabetics' Cookbook (Among ads in September issue)
Diagnosis and Treatment of Diverticulitis and Diverticulosis, L. O. Ely, M.D. 229
Diagnosis of Neoplasm From Serous Effusion (Editorial) 431
Diagnostic Approach in a Hemorrhagic State, A. J. Quick, M.D. 321
Diddle, A. W., M.D., Causes and Prevention of Postpartum Hemorrhage 58
Difficult Patient, H. P. Rome, M.D. 1
Disappointment (Editorial) 85
Diseases of Chest 100
Disseminated Histoplasmosis, Acute, C. A. Sones, M.D., *et al.* 463
Diverticulitis and Diverticulosis. Diagnosis and Treatment of, L. O. Ely, M.D. 229
Dizziness of Obscure Etiology, C. M. Kos, M.D. 13
Donnelly, Madelene M., M.D., Hemorrhage as Cause of Maternal Death in Iowa 62
Do We Face Shortage of Physicians? (Editorial) 248
Doctors Are Receiving Soviet Mailings 265
Doctor's Business 49, 89, 159, 205, 257, 303, 346, 435, 500, 543, 592, 646
Doctor's Duties as Citizen 103
Doctors' Help is Needed 92
Don't Rub Snow on Frostbite 84
Dunn, Robert C., M.D. (co-author), Acute Disseminated Histoplasmosis: Report of Case in Adult 463

E

Early Ambulation (Editorial) 485
Early Postsurgical Ambulation, L. T. Palumbo, M.D. .. 12
Easter Chicks Carry Stomach Infection (Among ads in September issue)
Ely, Lawrence O., M.D., Diagnosis and Treatment of Diverticulitis and Diverticulosis 229
Emergency Surgery for GP's 640
Emotional Problems of the Chronically Ill, S. L. Sands, M.D. 234
Endocardial Fibro-elastosis of Heart, Case of, SUI CPC 620
Endocrinology for GP's 589
End of Rainbow (Editorial) 249
Endometriosis: Newer Concepts, A. E. Schill, M.D..... 283
Essay Contests (Among ads in September issue)
Evans, Titus C., Ph. D., Radioactive Iodine in Study of Thyroid Disorders 179
Erythroblastosis Fetalis (Editorial) 199
Experience With Abruptio Placentae and Fibrinogenopenia, E. S. Taylor, M.D., and H. M. Haugen, M.D. 600
Eye Defects Common Among Cerebral Palsied (Among ads in September issue)

F

Fairs as Medical P-R Media 649
Federal Action on Narcotic Addiction 28
Federal Health Budget, 1956 (Editorial) 627
Federal Money for SUI Research Center 87
Femur (Neck) Replacement Prosthesis, L. T. Ford, Jr., M.D., and J. A. Key, M.D. 597
Fifty Year Club Members 403
Film on Lung Cancer (Among ads in March issue)
Fluid Loss in Infants Needs Watching (Among ads in March issue)
For Patients Only (Among ads in September issue)
Ford, Lee T., Jr., M.D. (co-author), Present Day Management of Colles' Fracture 324
Ford, Lee T., Jr., M.D. (co-author), Replacement Prosthesis for Fractures of Neck of Femur 597
Forensic Medicine 87
Foul Ball! (Editorial) 429
From, Paul, M.D., Medical Aspects of Intractable Ascites 279
Fundamental Errors in Anesthesia, S. C. Cullen, M.D. . 421

G

Gallagher, J. Roswell, M.D., Treatment of Adolescents .. 505
Galloping Socialism (Editorial) 202
Gastric Surgery, Antrum in, H. H. McCarthy, M.D., and C. J. Wilhelmj, M.D. 451
Gastroenterology for General Physicians 545, 588
Gastro-Esophageal Hiatal Hernia, Diagnosis and Treatment, A. H. Kelly, M.D. 418
General Practice of Otolaryngology, O. L. Thorburn, M.D. 425
General Practitioners' Courses at Minneapolis 496
General Practitioner of Year 315
Gerontology Institute at Iowa City (Among ads in October issue)
Gifts for SUI College of Medicine 640
Gius, John A., M.D. (co-author), Cholangiography in Surgery of Biliary Tract 513
Goddard, C. R., M.D. (co-author), Medical Treatment of Hypertension for General Practitioner 224
Golf Tournament 203
GP Prints a Sketch of Dr. Sproul 569
Gynecology (Among ads in October issue)

H

Hanssmann, I. J., M.D., Current Therapy of Essential Hypertension 606
Happy New Year (Editorial) 29
Haugen, H. M., M.D. (co-author), Experience with Abruptio Placentae and Fibrinogenopenia 600
Have You Missed a Valuable Experience? (Editorial).. 485
Hardwig, O. C., M.D., Silent Cholelithiasis 508
Health Careers Guidebook 228
Health Costs Estimated and Subdivided 46
Heart Conference in Des Moines 93
Hematuria: Its Clinical Significance, C. C. Higgins, M.D. 557
Hemorrhage as Cause of Maternal Death in Iowa, M. M. Donnelly, M.D. 62
Hemorrhagic State, Diagnostic Approach in, A. J. Quick, M.D. 321
Hendricks, A. B., M.D., Protean Manifestations of Periarteritis Nodosa 75
Hepatitis, Some Problems in Treatment of, F. H. Coulson, M.D. 564
Hernia, Gastro-esophageal Hiatal, Diagnosis and Treatment, A. H. Kelly, M.D. 418
Higgins, Charles C., M.D., Hematuria: Its Clinical Significance 557
Highlights of AMA Institute on P-R 538
History of a Threat (Editorial) 534
Hodges, Francis T., M.D., What Your Blue Shield Means to You 469
Home Care for T-B Patients (Among ads in November issue)
Honke, Edward M., M.D. (co-author), Congenital Anomalies of Testes 519
Hospital-Physician Trial, Summary of Testimony and Decision in 629
Hypertension, Essential, Current Therapy of, I. J. Hanssmann, M.D. 606
Hypertension, Medical Treatment of, for the GP, C. R. Goddard, M.D., *et al.* 224

I

I.A.G.P. Is Growing (Editorial) 252
Important Request from AMA 72
Income Tax Booklet 266
Increase in Dues (Editorial) 341
Industrial Medicine Course 349
Infectious Mononucleosis, Acute Hemolytic Anemia in, L. J. Kirham, M.D. 525
Information About New Veterans Memorial Auditorium (Editorial) 203
Institute of Agricultural Medicine 434
Interim Session of House of Delegates of AMA, Miami, Nov. 29-Dec. 2 44
Institutes on Care of Prematures 575
International College of Surgeons 282, 462
Inter-Society Cytology Council (Among ads in August issue)
Interstate Postgraduate Medical Assn. (Among ads in September issue)
Intractable Pain, Treatment of, C. Brown, M.D.. and J. Kell, Jr., M.D. 4
Iowa Academy of General Practice 48, 92, 158, 209, 255, 307, 350, 440, 496, 544, 588, 641
Iowa Lags in AMEF Contributions (Editorial) 535
Iowa Lags in AMEF Gifts (Editorial) 156
Iowa-Nebraska Medical Assembly (Among ads in March issue)
Iron Lung?—Not for Me! 46

ISMS Begins New T-V Series 551
ISMS Television Program Wins National Award 231

J

Jackson, Robert L., M.D. (co-author), Mortality Study of Young Diabetic Patients 137
January, L. E., M.D., Treatment of Paroxysmal Tachycardias 124
Jenkins-Keough Clears a Hurdle (Editorial) 533
John Thomas McClintock, 1873-1955, An Appreciation .. 636
Johnson, C. J., M.D. (co-author), Cholangiography in Surgery of Biliary Tract 513
Journal Book Shelf
.....51, 95, 161, 207, 258, 304, 348, 438, 493, 540, 582, 639
June Clinics in Denver 305

K

Kansas City Southwest Clinical Society 524
Kansas Heart Conference 107
Kell, Joseph F., Jr., M.D. (co-author), Treatment of Intractable Pain 4
Kelly, Anthony H., M.D., Gastro-Esophageal Hiatal Hernia, Diagnosis and Treatment 418
Kersten, Paul M., M.D., Suicide and Physician 610
Key, J. Albert, M.D. (co-author), Present Day Management of Colles' Fracture 324
Key, J. Albert, M.D. (co-author), Replacement Prosthesis for Fractures of Neck of Femur 597
Kirkham, L. J., M.D., Acute Hemolytic Anemia in Infectious Mononucleosis 525
Kirsner, Joseph B., M.D., Chronic Ulcerative Colitis: Current Therapeutic Considerations 119
Kos, C. M., M.D., Dizziness of Obscure Etiology 13

L

Larimer, Robert C., M.D., Chronic Alcoholism 415
Latchem, C. W., M.D., Significance of Pyuria in Children 276
Law Facilitates Disciplining of Doctors 265
Lectures on Streptococcal Infections 28
Lederle Symposium at Madison (Among ads in June issue)
Legislature's Record (Editorial) 430
Lesions of Pancreas of Surgical Interest, J. T. Priestley, M.D. 65
Letter to the Editor 32, 343, 486, 636
Live Rabies Vaccine 427
Lupus Erythematosus, Case of, SUI Clinical Pathologic Conference 144

M

Macular Degeneration, Some Aspects of, F. W. Newell, M.D. 337
Management of Pre-Eclampsia and Eclampsia, R. E. Nicodemus, M.D. 553
March of Medicine 649
Marks of Capable Practitioner 298
Mason, Edward E., M.D., Thromboembolism and Anticoagulants in Surgery 8
Maternal Death, Hemorrhage as Cause of, in Iowa, M. M. Donnelly, M.D. 62
Maybe It's Not Too Bad (Editorial) 577
Mayo Lectures and Discussions 28
McCarthy, Harry H., M.D. (co-author), Antrum and Present Day Gastric Surgery 451
McClintock, John Thomas, 1873-1955, An Appreciation .. 636
McKay, Richard V., Jr., M.D., Recent Advances in Diabetes Mellitus 560
MacQueen, J. C., M.D. (co-author), Clinical Problems of Acute Poliomyelitis 267
MD's Are Family Men Par Excellence (Among ads in November issue)
Medical Aid Program for the Orient (Editorial) 31
Medical Aspects of Intractable Ascites, Paul From, M.D. 279
Medical History 96
Medical Schools Are Growing 216
Medical Schools Face Problem 580
Medical Technologists' Course (Among ads in November issue)
Medical Treatment of Hypertension for General Practitioner, C. R. Goddard, M.D., *et al.* 224
Medical Uses of Atomic Energy (Editorial) 154
Medicolegal Symposia (Among ads in August issue)
Medicolegal Symposia at Omaha and Chicago 545
Meeting on Rural Health 491
Membership Roster of Iowa State Medical Society 393
Membership Roster of Woman's Auxiliary 404
Meningitis, Chronic Serous; Two Case Reports and Review of Literature, R. M. Blizzard, M.D. 127
Menstrual Taboos 444
Mental Illness
.....58, 100, 170, 210, 260, 305, 349, 439, 501, 541, 589, 642
Mental Illness Film in AMA Library 629
Meritorious Service Awards 307
Minnesota Symposium on Arteriosclerosis (Among ads in August issue)
Minutes of Meetings of State Society Officers and Committees 32, 87
Minutes of 1955 Sessions of (ISMS) House of Delegates . 359
Miss Mary McCord (Editorial) 298
Month in Washington (Among ads in each issue)
Morris, Robert L., M.S., Protecting Private Water Supplies 187
Mortality Study of Young Diabetic Patients, D. W. Ortmeyer, M.D., and R. L. Jackson, M.D. 137
Mr. Ray Stewart (Editorial) 432
Mulier, J. C., M.D. (co-author), Clinical Problems of Acute Poliomyelitis 267
Multiple Sclerosis, Case of, SUI Clinical Pathologic Conference 78

N

Nail Polish Seals Fungal Infection 625
National Registry of Medical Secretaries (Among ads in January issue)
Need for Nutrition Research 216
New Circulation Record (TODAY'S HEALTH) 58
New Health Facility at Council Bluffs 212
New Jersey Praises Tennessee (Among ads in July issue)
New Manual for Medical Assistants 441
New Philanthropy in Wisconsin 449
New Virus Infection of Eye 637
Newell, Frank W., M.D., Some Aspects of Macular Degeneration 337
Newer Trends in Cesarean Section, J. H. Randall, M.D. 173
Nicodemus, Roy E., M.D., Management of Pre-Eclampsia and Eclampsia 553
1955 Annual Meeting (Editorial) 153, 295
No Failures Among SUI Graduates (Among ads in July issue)
Nominations Invited (Among ads in March issue)
Normal Red Blood Cell Count (Editorial) 252
Nutrition Education at Supermarket 441

O

Ob. & Gyn. Boards, Pt. II (Among ads in March issue)
Ob. & Gyn. Conference at Omaha (Among ads in January issue)
Obstetrics for General Physicians 609
Officers and Committees, Iowa State Medical Society ... 391
Omaha Mid-West Clinical Society 544
Open Letter to Mr. Louis B. Blair 99
Ophthalmology & Otolaryngology 619
Ortmeyer, Donald W., M.D. (co-author), Mortality Study of Young Diabetic Patients 137
Ostler, H. B., M.D. (co-author), Statistics on 100 Cases of Retinal Detachment Surgery 473
Otolaryngology, General Practice of, O. L. Thorburn, M.D. 425
Our Thanks to 1955 Technical Exhibitors (Editorial) ... 344

P

Palumbo, Louis T., M.D., Early Postsurgical Ambulation 12
Pancreas, Lesions of, J. T. Priestley, M.D. 65
Parke, Davis Will Issue New Leaflet 265
Paroxysmal Tachycardias, Treatment of, L. E. January, M.D. 124
Paulus, E. W., M.D. (co-author), Medical Treatment of Hypertension for General Practitioner 224
Pediatrics for Pediatricians (Among ads in September issue)
Pediatrics, Obstetrics and Gynecology (Among ads in November issue)
Pediatrics Series to Be Televised (Among ads in November issue)
Periarteritis Nodosa, Protean Manifestations of, A. B. Hendricks, M.D. 75
Personals (Among ads in each issue)
Pesticide Committee Issues Warning 193
Physical Medicine Meeting 193
Physician as Efficiency Expert (Editorial) 579
Physician Placement Service (Editorial) 579
Physicians Don't Leave Huge Estates 566
Physician's Supplication (Editorial) 86
Pickworth, F. W., State and Federal Help in Programs for Older Citizens 19
Picture of Industrial Medicine in Iowa (Editorial) 295, 341
Pierson, Lawrence E., M.D. (co-author), Congenital Anomalies of Testes 519
Polio Ahead (Among ads in December issue)
Poliomyelitis, Clinical Problems Related to, J. C. MacQueen, M.D., and J. C. Mulier, M.D. 267
Postgraduate Assembly on Endocrinology (Among ads in August issue)
Postgraduate Courses at Minneapolis 72, 212
Postgraduate Courses in Chest Diseases 427
Postgraduate Lecture 100
Postpartum Hemorrhage, Causes and Prevention of, A. W. Diddle, M.D. 58
Pre-Eclampsia and Eclampsia, Management of, Roy E. Nicodemus, M.D. 553
"Prescription for Medical Partnerships" 156
Present Day Management of Colles' Fracture, L. T. Ford, Jr., M.D., and J. A. Key, M.D. 324
President's Address, G. V. Caughlan, M.D. 317
President-Elect's Address, L. A. Coffin, M.D. 319
Presidents' and Secretaries' Conference 535
President's Page
.....47, 94, 157, 204, 254, 302, 345, 433, 492, 539, 581, 638
Priestley, James T. M.D. Lesions of Pancreas of Surgical Interest 65

Problem of Ano-Rectal Tumors H. F. Trafton, M.D. 328
Program for Combatting Juvenile Delinquency 265
Program for Washington County Cardiac Farmers 530
Program, 1955 Annual Meeting of Iowa State Medical Society 109
Prophylaxis for Rheumatic Fever 636
Prophylaxis of Neck Pains (Editorial) 628
Protean Manifestations of Periarteritis Nodosa, A. B. Hendricks, M.D. 75
Protecting Private Water Supplies, R. L. Morris, M.S. ... 187
Proteus Septicemia, Case of, SUI Clinical Pathologic Conference 241
Pruitt, Raymond D., M.D., After Myocardial Infarction, What? 219
Psychiatric Lectures in Illinois 547
Psychosomatic Problems 449
Public Relations Meeting 247
Public's View of Health Costs 649
Pyuria, Significance of in Children, C. W. Latchem, M.D. 276

Q

Questionnaire on Industrial Health (Editorial) 253
Quick, Armand J., M.D., Diagnostic Approach in Hemorrhagic State 321

R

Radioactive Iodine in Study of Thyroid Disorders, T. C. Evans, Ph.D. 179
Radiology for Radiologists (Among ads in September issue)
Randall, J. H., M.D., Newer Trends in Cesarean Section 173
Rays of Hope in Mental Health (Among ads in November issue)
Recent Advances in Diabetes Mellitus, R. V. McKay, Jr., M.D. 560
Refresher Course in Surgery 619
Regional Concept in Continuation Education (Editorial) 85
Regional Meetings of ICS 100
Rehabilitation Advances (Editorial) 342
Rehabilitation Conference at Creighton (Among ads in September issue)
Remarkable Electron Photomicrographs 98
Renal Injury Produced by Boxing 432
Repeats Gift to Educational Fund 46
Replacement Prosthesis for Fractures of Neck of Femur, L. T. Ford, Jr., M.D., and J. A. Key, M.D. 597
Resection of Terminal Aorta and Replacement With Aortic Homograft, E. S. Brintnall, M.D., *et al.* 272
Retinal Detachment Surgery, Statistics in 100 Cases of, A. E. Braley, M.D., and H. B. Ostler, M.D. 473
Revised List of AMA Films (Among ads in November issue)
Risk of Heavy Earrings 449
Rocky Mountain Cancer Conference (Among ads in May issue)
Role of Vitreous Humor in Various Eye Diseases, E. E. Anderson, M.D. 567
Rome, Howard P., M.D., Difficult Patient 1
Roster of Iowa Physicians in Military Service (Among ads in each issue)
Rotkow, Maurice J., M.D. (co-author), Acute Disseminated Histoplasmosis: Report of Case in an Adult 463
Routine Examination of Colon Advised 476
Routine Tetanus Prophylaxis Is Inadequate (Editorial) 29
Rules of AMA Judicial Council (Among ads in August issue)
Russell, Elwood P., M.D., Surgical Lesions of Small Intestine 457

S

Sands, Sidney L., M.D., Emotional Problems of Chronically Ill 234
Schill, Austin E., M.D., Endometriosis: Newer Concepts 283
Scurvy in Iowa, Case Report 441
Sectional Meeting of ACS in Cleveland 74
"Series H" Treasury Bonds (Among ads in May issue)
Serious Problem 208
Short Courses at Iowa City 487
Short Course Plus Vacation (Among ads in September issue)
Show Business Blamed for Sex Hysteria (Editorial) 30
Significance of Pyuria in Children, C. W. Latchem, M.D. 276
Silent Cholelithiasis, O. C. Hardwig, M.D. 508
Sioux Valley Meeting at Sioux Falls 93
Slipped Capital Femoral Epiphysis, M. Bonfiglio, M.D. 189
Small Intestine, Surgical Lesions of, E. P. Russell, M.D. 457
Social Workers Deserve Cooperation 635
Some Aspects of Macular Degeneration, F. W. Newell, M.D. 337
Some Problems in Treatment of Hepatitis, F. H. Coulson, M.D. 564
Sones, Clement A., M.D. (co-author), Acute Disseminated Histoplasmosis: Report of Case in an Adult 463
Speakers' Bureau Schedules ..... 56, 168, 216, 264, 356, 448 and among ads in February, June, September, October, November and December issues
Special Session of House of Delegates (ISMS), Des Moines, December 12, 1954 33
Squire, Fay H., M.D., Carcinoma of Lung 409
State and Federal Help in Programs for Older Citizens, F. W. Pickworth 19
State Department of Health 52, 101, 162, 211, 261, 308, 352, 442, 498, 546, 590, 650
State Society Gets Testimonial (Among ads in June issue)
Statistics on 100 Cases of Retinal Detachment Surgery, A. E. Braley, M.D., and H. B. Ostler, M.D. 473
Stomach Ulcers in Children 501
Substitute for Doctor Draft 468
SUI Gets Kellogg Subsidy 490
SUI Hematology Course Cancelled (Among ads in November issue)
SUI Medical Research Center (Among ads in December issue)
SUI Postgraduate Courses 93
SUI Psychiatrists Test Sedative 164
Suicide and the Physician, P. M. Kersten, M.D. 610
Summary of Testimony and Decision in Hospital-Physician Trial 629
Surgical Heart Disease 123
Surgical Lesions of the Small Intestine, E. P. Russell, M.D. 457
Surgery Short Course (Among ads in May issue)

T

Taber, Rodman E., M.D. (co-author), Resection of Terminal Aorta and Replacement With Aortic Homograft 272
Tax Pamphlet Appeals for AMEF Gifts 637
Taylor, E. Stewart, M.D. (co-author), Experience With Abruptio Placentae and Fibrinogenopenia 600
Tenth National Conference on Rural Health (Editorial) 202
Testes, Problems in Management of Congenital Anomalies of, E. M. Honke, M.D., and L. E. Pierson, M.D. 519
Thorburn, Oral L., M.D., General Practice of Otolaryngology 425
Thromboembolism and Anticoagulants in Surgery, E. E. Mason, M.D. 8
Thyroid Gland, Carcinoma of, M. A. Blackstone, M.D. .. 73
Tobacco-Cancer Research Is Well Financed 212
To The Doctors of Iowa, A Message from Dean Norman B. Nelson 171
Tractors and Prostatitis (Editorial) 628
Trafton, Harold F., M.D., Problem of Ano-Rectal Tumors 328
Treatment of Adolescents, J. R. Gallagher, M.D. 505
Treatment of Intractable Pain, C. A. Brown, M.D., and J. F. Kell, Jr., M.D. 4
Treatment of Paroxysmal Tachycardias, L. E. January, M.D. 124
Trotzig, Joseph, M.D., Chyle Peritonitis, Report of Case 232
Twilight of Waiting Room 449

U

Ulcerative Colitis, Chronic: Current Therapeutic Considerations, J. B. Kirsner, M.D. 119
Uniform Claim Blanks Nearly Ready 635
University Issue (Editorial) 199
Untoward Drug Reactions (Editorial) 342
Upper Des Moines Valley Medical Society 440
Urokon Death, Case of, SUI Clinical Pathologic Conference 570

V

Vitreous Humor, Role of in Various Eye Diseases, E. E. Anderson, M.D. 567

W

Walker, Sam H., M.D. (co-author), Resection of Terminal Aorta and Replacement With Aortic Homograft 272
Weight Control 490
We Stand Corrected (Editorial) 298
What Do We Expect of Adolescents? H. H. Comly, M.D. 333
What the Doctor Isn't Paid for (Among ads in April issue)
What Your Blue Shield Means to You, F. T. Hodges, M.D. 469
Why De-Emphasize Syphilis? 547
Why Patients Don't Pay 351
Wilhelmj, Charles M., M.D. (co-author), Antrum and Present Day Gastric Surgery 451
Wisconsin Radiologists Congratulate ISMS 580
WOI-TV Series Resumes April 28 (Among ads in April issue)
Woman's Auxiliary News 54, 104, 165, 213, 263, 311, 354, 445, 502, 548, 593, 647
Work Simplification for Better Living (Editorial) 343
Work Simplification for Cardiac Housewives (Editorial) 248
Work Simplification for the Homemaker (Editorial) 31
Wyeth Offers Streptococci Film 349

Y

You Can Help! (Editorial) 577
Your Blue Shield President Reports .....495, 585, 645 and among ads in October issue

Z

Ziffren, S. E., M.D. (co-author), Resection of Terminal Aorta and Replacement With Aortic Homograft 272

F

46220

Iowa state medical society.

AUTHOR Journal.
v.45, 1955

TITLE

DATE DUE | BORROWER'S NAME

APR 1 9 '60 | D. Petrushansky

46220

Iowa state medical society. Journal.
v.45, 1955

RETURN THIS BOOK ON OR BEFORE LAST DATE STAMPED

APR 1 9 '60